



Integrating Policies that Enable Minimally Processed Foods with Policies that Restrict Ultra-Processed Foods for Obesity and Noncommunicable Disease Prevention

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Received: 20 January 2026 / Accepted: 1 June 2026
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Abstract

Purpose of Review Historically, many food policies for obesity and noncommunicable disease prevention focus on reducing the demand for ultra-processed foods (UPFs). This narrative review examines why integrating policies that enable minimally processed foods (MPFs) with UPF restriction is critical for improving diets and health.

Recent Findings Despite progress from UPF-restrictive policies, MPF-related barriers like limited availability and accessibility, inadequate food preparation infrastructure, and limited time and cooking skills continue to undermine dietary quality. MPF-enabling measures like healthy food subsidies, public procurement standards, and communication campaigns can complement UPF-restrictive policies when implemented together, within or across policy domains. We describe how these policies intersect within food systems and how supportive legal and advocacy environments are key to amplify their collective impact.

Summary Enabling MPFs while restricting UPFs can produce mutually reinforcing effects on population diets. Rights-based legal frameworks and sustained advocacy are cornerstones for ensuring accountability, equity, and durability of these integrated approaches. Research should evaluate combined policy packages, examine equity implications, and inform the design of effective MPF-enabling and UPF-restrictive policies across food systems.

Keywords Ultra-processed foods · Minimally processed foods · Food policy · Noncommunicable disease prevention · Policy integration · Nutrition equity

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Introduction

The global prevalence of obesity and diet-related non-communicable diseases (NCDs) has risen sharply in recent decades, driven by profound changes in the global food system [1]. A central driver of this trend is the rapid expansion in the availability, marketing, and consumption of ultra-processed foods (UPFs)¹—industrial formulations containing additives and often high levels of nutrients of concern, strongly associated with higher risks of obesity, diabetes, and other NCDs [2, 3]. This expansion has displaced both

¹ UPFs are defined as branded, industrial formulations made from inexpensive ingredients extracted or derived from whole foods, combined with additives, containing little or no whole food, and designed to compete with minimally processed foods and freshly prepared meals while maximizing industry profits [4]. The term refers to both highly processed foods and beverages.

the availability of and demand for minimally processed foods (MPFs), such as fruits, vegetables, legumes, and whole grains, which are consistently associated with better health outcomes [1, 4].

Children warrant particular attention within this shifting food landscape. Evidence highlight that, for the first time, the prevalence of obesity among school-age children and adolescents exceeded underweight in 2025, largely due to the increased exposure to UPFs and limited access to MPFs [5]. Early dietary patterns shape taste preferences, metabolic trajectories, food knowledge, and dietary behaviors that persist into adulthood, influencing long-term risk of obesity and diet-related NCDs [6]. Exposure to and normalization of UPFs during childhood both results from and reinforces socioeconomic disparities in diet quality, as food environments are strongly patterned by structural constraints such as income [7].

Governments have responded by implementing policies to reduce consumption of products high in fats, sugars, and salt (HFSS), including sugar-sweetened beverages taxes, front-of-package labeling, and marketing restrictions [8]. Given that schools have become important sites where children are exposed to and access highly processed, unhealthy foods [9], school food standards have also been implemented to shape these institutional settings. Although these policies were generally designed to target HFSS rather than UPFs explicitly [10], they function in practice to discourage UPF consumption, as a significant proportion of products subject to these regulations are UPFs² [11]. Throughout this review, we refer to these interventions as “UPF-restrictive policies”, recognizing that while they do not capture all UPFs, they remain central tools for curbing UPF consumption. These measures reduce the availability and affordability of, as well as exposure to, a large share of UPFs and increase transparency around their health harms, thereby influencing purchasing decisions. As a result, they have contributed to healthier food environments and measurable reductions in purchases and consumption of regulated products [12–16].

Despite these advances, policy efforts have largely focused only on restricting UPFs, in part because such measures are relatively low cost, can generate revenue for governments, and offer pathways to address the concentrated power of the UPF industry [17]. However, persistent barriers to MPF consumption—including limited availability, accessibility, and desirability; higher relative prices compared with UPFs in many settings; inadequate storage and distribution infrastructure; limited affordability

and competing financial priorities (e.g., health and housing expenses); time scarcity; and gaps in nutrition knowledge—constrain the feasibility of healthier dietary substitution for many populations [18–22]. When these barriers remain unaddressed, UPF-restrictive policies alone may fall short of enabling equitable and sustained improvements in dietary quality and may even exacerbate existing inequities by leaving some groups with limited viable alternatives [23].

Effective strategies must therefore integrate policies that enable the production, distribution, affordability, and appeal of MPFs alongside UPF-restrictive measures. Such integration can produce synergistic effects, yielding greater improvements in diets [10, 24], while advancing sustainable, rights-based approaches to healthy eating. Despite growing evidence on the effectiveness of UPF-restrictive policies, little attention has been given to how these measures can be systematically linked with MPF-enabling ones. Until recently [10], these domains were largely examined separately, overlooking their interdependence and potential for stronger impacts when integrated.

In this review, we argue for integrating MPF-enabling with UPF-restrictive policies as part of comprehensive approaches to prevent obesity and NCDs, and support shifts toward minimally processed diets. We present a conceptual framework illustrating the intersections and reinforcements of restrictive and promotive measures, summarize evidence on their combined impact, and highlight the central role of legal strategies and sustained advocacy in advancing food system transformation that both restricts UPFs and enables MPFs.

Conceptual Framework for Cohesive Food Policy

The global nutrition transition, driven largely by the expansion of the transnational UPF industry, has accelerated a shift away from traditional diets based on MPFs toward diets dominated by UPFs [3, 25]. UPFs are not only highly processed but deliberately engineered to replace MPFs, offering hyper-palatable, shelf-stable, and heavily marketed products [3]. Their growing dominance has displaced foods from healthier, less processed food groups and contributed to excessive intake of energy and nutrients of concern (i.e., added sugars, sodium, and unhealthy fats) [3, 26]. At the same time, consolidation among multinational corporations, supported by governmental incentives, has reshaped food environments in ways that pressure small producers and reduce the availability and affordability of fresh foods [10, 25]. These changes have occurred alongside broader structural, commercial, and cultural shifts that make UPFs increasingly convenient and desirable while constraining access to MPFs [25].

² Through the use of best-practice nutrient profile models that incorporate processing-related markers (e.g., non-sugar and other sweeteners), policies originally focused on HFSS products are increasingly being expanded to capture a larger share of UPFs within regulatory frameworks.

Figure 1 presents an integrated conceptual framework that situates dietary behaviors, including food practices, as the outcome of a dynamic imbalance between drivers of UPF and MPF consumption. At the top of the framework, a seesaw illustrates this tension, emphasizing that population diets are shaped by the forces promoting UPFs versus those enabling MPFs, rather than by individual choice alone. These dynamics reflect broader structural conditions that shape life opportunities and constraints, consistent with social determinants of health frameworks, and are also shaped by a range of individual and social factors [27]. Beneath this seesaw, the framework identifies the interacting facilitators of UPF consumption and barriers to MPF consumption operating at individual and social levels, as well as structural levels [4, 19–22, 28]. The factors depicted in the figure are illustrative rather than exhaustive and represent examples of how these multilevel influences manifest in daily food practices. Crucially, the structural facilitators and barriers, which food policy interventions most often aim to modify, are expressions of deeper institutional and legal arrangements that sustain the current food system status quo. Although often perceived as neutral, these arrangements reflect political and economic choices embedded in laws, regulations, and administrative processes. By shaping prices, market power, and food availability, they simultaneously reinforce UPF consumption and limit MPF access [25].

To rebalance this system, the framework situates public policies beneath these determinants, illustrating how integrated policy action can shift the seesaw toward healthier dietary patterns. Rather than presenting policies as isolated instruments, the framework uses overlapping circles to depict synergies between UPF-restrictive and MPF-enabling approaches, both within and across policy domains. UPF-restrictive policies³ include taxes on UPFs and sweetened beverages, mandatory front-of-package labeling, marketing restrictions, and the removal of subsidies or tax exemptions that support UPF production and distribution [8, 10].

The framework emphasizes that without deliberate efforts to improve availability of and access to MPFs, dietary improvements may be limited or inequitable. MPF-enabling policies include healthy food subsidies and tax exemptions, public healthy food procurement and provision policies across schools and other public institutions, and institutional feeding programs linked to education and food literacy [10]. Depending on the policy domain, restrictive and promotive objectives may be integrated within dual-function interventions (e.g., coupling UPF taxes with healthy food subsidies)

or pursued through distinct but complementary policies that jointly reshape food environments (e.g., warning labels combined with procurement standards and health communication campaigns). Across domains, strategic communication campaigns can enhance public understanding, acceptability, and effectiveness of both UPF-restrictive and MPF-enabling policies.

The framework also highlights the central role of legal strategies, sustained advocacy, and research in addressing the institutional and legal arrangements underpinning both UPF facilitators and MPF barriers. Legal strategies include early engagement in policy development, alignment with rights-based frameworks, and accountability mechanisms that challenge government and the UPF industry alike. Sustained advocacy builds political and public support, counters industry influence, and ensures meaningful civil society participation, ultimately strengthening standards. Research strengthens evidence, guides implementation, and supports policy learning. Together, these approaches are essential for recentering food systems around nutrition, health, and equity, and for sustaining integrated policy approaches over time.

Overall, equitably improving population diets requires addressing both sides and the foundations of the food system: constraining the structural, social, and individual forces that promote UPFs while strengthening the environments that make MPFs available, accessible and appealing. This conceptual framework sets the stage for examining how specific policy domains can operationalize integrated strategies across diverse food system contexts.

Policy Domains to Restrict UPFs and Enable MPFs

The following section describes key policy domains through which governments can restrict UPFs while enabling MPF consumption, outlining core regulatory mechanisms, illustrative global examples, and areas of complementarity and tension between restriction and promotion strategies.

School Food and Public Food Procurement Policies

School food environments are a critical setting for influencing children's dietary behaviors and long-term health. Recent policy efforts have prioritized measures that limit exposure to unhealthy options, including restrictions on sugar-sweetened beverages, items exceeding thresholds for nutrients of concern, or UPFs identified through legally codified definitions [29, 30]. These policies often limit in-school promotion, distribution, and retailing of such products. A recent review evidenced that 28% of countries

³ UPF-restrictive policies include not only measures that impose constraints on UPF production, marketing, or consumption, but also those that remove structural facilitators that support their production and availability.



Barriers to MPF consumption:

Individual and social

- Time constraints
- Affordability constraints and competing financial priorities
- Limited availability, accessibility, and desirability of MPFs
- Limited culinary knowledge, skills or equipment
- Limited social support favoring home preparation

Structural

- Limited availability of MPFs
- Higher relative cost
- Low or no visibility and marketing
- Lack of adequate storage infrastructure
- Weak public procurement

Facilitators of UPF consumption:

Individual and social

- Convenience coupled with societal time scarcity
- Appealing sensory characteristics, suggesting addiction
- Social practices normalizing UPF consumption

Structural

- Low cost and high affordability
- Aggressive marketing and advertising
- Wide availability and accessibility
- Confusing and misleading labeling
- Industry-influenced social and cultural norms

Policies to enable MPF consumption (↑) and restrict UPF consumption (↓):

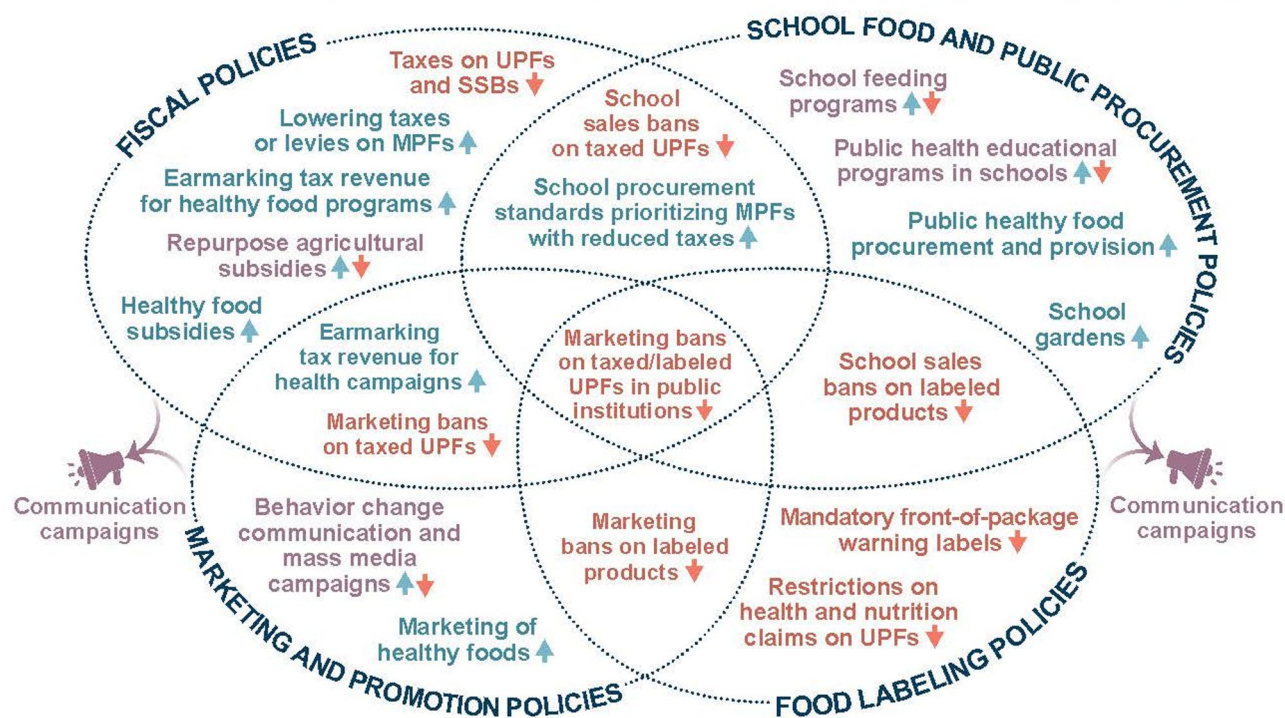


Fig. 1 Conceptual diagram for the integration of policies enabling minimally processed foods (MPF) with policies restricting ultra-processed foods (UPF). *Barriers, facilitators, and policy combinations shown are illustrative examples and do not represent an exhaustive list of determinants of dietary behavior or available interventions

have national-level policies restricting marketing or sale of unhealthy foods in schools, with most concentrated in high-income countries [9].

While essential for reducing access to UPFs, these measures are unlikely to generate sustained improvements in diet quality on their own [31]. Policies that actively promote MPF consumption are therefore critical to ensure that healthier choices are available, accessible, and appealing. Healthy public food procurement interventions, such as school meal programs, provide a central platform for this integration, as they have the potential to impact both food consumption and food production patterns [32]. Procurement standards that prioritize MPFs and local sourcing can shape food supply chains, support small-scale producers, and influence food preferences [33]. Brazil's National School Feeding Program exemplifies this approach by requiring that at least 75% of foods served be minimally processed and that at least 30% of food purchases come from local family farms and indigenous and Quilombola communities [34, 35]. Legal adaptations, such as simplified procurement processes, have further expanded participation by historically disadvantaged producers [36].

Beyond schools, public institutions such as hospitals, childcare centers, universities, military facilities, correctional institutions, government workplaces, and social programs collectively serve millions of meals daily and shape food environments for diverse population groups [37]. By setting mandatory nutrition and processing standards for foods purchased, prepared, and served, these policies can limit the procurement of UPFs while prioritizing MPFs, including fresh, seasonal, and culturally appropriate foods [32, 37, 38]. When aligned with dietary guidelines and accompanied by adequate infrastructure, workforce training, and monitoring systems, public food procurement policies can extend the benefits observed in school meal programs to the broader population, amplifying their potential for population-level dietary improvement and food system transformation [32, 37].

However, MPF-enabling measures extend beyond procurement. Educational and environmental interventions, including school gardens, nutrition education, and cooking activities aligned with national dietary guidelines can reinforce familiarity with and acceptance of MPFs [39]. For example, the Food and Agriculture Organization of the United Nations has promoted school gardens for over a decade as a strategy to foster healthier food environments [40] and evidence show that such activities strengthen food

literacy and culinary skills [41]. Additionally, Vietnam's Home-Grown School Feeding program uses school gardens to supply fresh produce, improve children's diets, and strengthen local food systems [42]. These approaches are especially important because UPF-restrictive policies alone do not address the access, knowledge, and skill barriers that limit MPF consumption. Such programs can improve nutritional status and enhance acceptance of and preference for MPFs [43].

A rights-based perspective further supports the integration of MPF-enabling measures with UPF restrictions. Under the Convention on the Rights of the Child, for example, governments are obligated to uphold children's rights to health and adequate nutrition [44]. School and public food procurement policies that combine marketing restrictions, MPF-enabling procurement standards, and supportive educational strategies offer concrete mechanisms to fulfill related obligations.

Fiscal Policies

Fiscal measures are central to shifting dietary patterns, yet most policies over the past decade have largely focused on discouraging unhealthy products rather than improving the affordability of MPFs. Nutrient-adequate diets aligned with national dietary guidelines remain economically out of reach for many low-income households [45], while diets high in UPFs are often cheaper [46, 47]. Fiscal policies must therefore address conditions that shape relative prices and purchasing power to support healthier diets.

Food prices reflect political and economic choices embedded in fiscal systems, which have historically favored UPFs over MPFs through subsidies and tax breaks. The global increase in UPF consumption has been closely linked to policies that enable the large-scale production and marketing of cheap UPFs, often at the expense of crop diversity, farmers' livelihoods, and natural resources (e.g., substantial water use associated with UPF production) [10, 48, 49]. Governments often forego resources to benefit UPF corporations (e.g., tax deductions on commodities for UPF production and on UPF advertising) while citing lack of funds to enhance MPF access or related infrastructure. Challenging this imbalance is a matter of fiscal justice rooted in rights-based frameworks, requiring governments to mobilize resources to fulfill the rights to health and adequate food [50].

Beyond removing tax breaks and subsidies for UPF inputs, governments should repurpose agricultural investments to strengthen the production and supply of nutrient-dense MPF. Targeted support for small-scale farmers cultivating horticultural crops, pulses, and other MPFs can increase availability and reduce costs of healthy foods, as

well as enhance the resilience of local food systems [51]. Reorienting public investment in this way not only diversifies production but also stimulates local economies and better aligns agricultural policy with nutrition and health goals [10, 51]. Integrating this approach with health taxes and healthy food subsidies for low-income households creates a coherent fiscal framework that addresses both the production and affordability of healthier foods.

Health taxes on UPFs can reduce consumption of unhealthy options and raise revenue [52]. However, taxation alone does not resolve affordability barriers to MPFs. Complementary strategies are essential, including healthy food subsidies to lower-income households [53], removal of taxes on MPFs [54], and financing institutional feeding programs in underserved communities [55]. Together, these strategies can act as dual-function interventions that mitigate economic inequities in access to healthy diets.

Global experiences show both the promise and the political challenges of this integration. In Brazil's 2023 tax reform, advocates secured tax exemptions for MPFs included in the dietary guidelines [56], but faced corporate opposition to UPF taxation, resulting in a sweetened beverage tax applied only to soft drinks [57]. Contrastingly, Hungary's 2011 public health product tax targeted products exceeding thresholds for selected nutrients of concern, with revenues linked to health initiatives [58, 59]. Despite these innovations, evidence on their dietary impact remains limited.

Equitable fiscal policies that roll back the fiscal advantages currently granted to the UPF industry, restrict UPFs, and promote MPFs are needed. UPF taxes reduce unhealthy consumption and generate funds that, when reinvested, can lower MPF prices and improve accessibility. Assistance for small-scale farmers through grants or subsidies to expand production of healthy crops can further support procurement programs [60], strengthening local food systems. However, these approaches are often hindered by industry opposition and competing governmental budget priorities [61]. Soft earmarking⁴ can offer a feasible approach to direct revenues toward food security initiatives, small-scale farmers support, or school food infrastructure, creating a cohesive fiscal framework for NCD prevention.

Food Labeling Policies

Front-of-package labeling is a key global nutrition policy and a cost-effective intervention to prevent NCDs, providing consumers with accessible nutritional information

[62]. Notably, front-of-package warning labels (FOPWLs) allow consumers to quickly identify unhealthy products. To date, FOPWLs have largely targeted HFSS foods, most of which are UPFs. Evidence from Latin America shows that FOPWLs reduce purchases of unhealthy products [15, 63] without increasing prices or harming employment [64, 65], potentially helping shift demand toward MPFs.

While reformulation is not the main objective of FOPWLs, industry often reformulates products to avoid labels [66–68]. Although nutritional improvements may occur, products usually remain UPFs. In Chile, sugar was replaced with non-sugar sweeteners (NSS), maintaining the sweetness of beverages [69] and increasing intake of NSS [70]. Anecdotally, in Colombia, there is emerging evidence that savory snack companies replaced nutrients like salt and saturated fat with more additives to avoid labels. Because additives and processing may pose health concerns beyond nutrients of concern [3], complementary strategies are needed. The incorporation of warnings explicitly identifying additives commonly found in UPFs, such as NSS in Argentina, Mexico, and Colombia, can discourage substitution of sugar with NSS.

The role of labeling in promoting MPFs is limited, partly because MPF are less frequently packaged. Voluntary “healthy food” labels show mixed effectiveness and are often allowed on UPFs that meet certain nutrient criteria, generating health halo effects that undermine FOPWL. Israel first introduced a mandatory FOPWL system alongside a voluntary green label intended to identify MPFs [71]. However, anecdotal evidence suggests that the industry has co-opted the green label, putting similar-looking green labels on unhealthy products to make them appear healthier [72]. This emphasizes the need for restrictions on “positive” claims (e.g., health, nutrition, and environmental) on products with warnings [73], as implemented in Mexico.

Although dual-function labeling system that both discourages UPFs and promotes MPFs may be appealing, limited real-world evidence on positive labels coupled with the anecdotal evidence about Israel's policy suggest caution. Additionally, labeling may function primarily by reducing misinformation and confusion, which may be less relevant for MPFs. Reflecting these realities, WHO recommends a single, clear, and mandatory labeling system to maximize the impact of FOPWLs [74]. In this domain, maintaining a focus on UPF-restriction may be more effective than attempting a dual-function approach.

To amplify the impact of FOPWLs on UPF-restriction, labeling policies should be combined with complementary measures such as taxes on unhealthy products, restrictions on their sale in public institutions, and marketing bans

⁴ Soft earmarking refers to the practice of administratively directing tax revenues toward priority investments without legally binding them to a specific purpose.

(Fig. 1) [8, 10]. Integrating labeling with these interventions strengthens the overall policy impact by addressing both the environmental and informational drivers of food choice [8]. This coordinated approach can more effectively reduce UPF consumption and support healthier dietary patterns when paired with MPF-enabling policies across multiple domains.

Marketing Regulation and Promotion Policies

Food-related communication is a powerful driver of food preferences and norms, particularly among children, and plays a central role in shaping food environments [75]. Unhealthy food marketing negatively influences consumers' preferences and eating behaviors [76], and disproportionately targets groups experiencing socioeconomic vulnerability [77]. WHO recommends mandatory policies tied to government-led nutrient profiles to limit children's exposure to the marketing of HFSS products across all media and settings [78, 79].

Countries that have adopted statutory approaches demonstrate measurable impacts. Chile's restrictions on child-directed marketing and daytime television advertising for HFSS products reduced child-targeted marketing strategies and children's exposure to unhealthy food advertising [80, 81]. Similarly, London's restrictions on outdoor advertising of HFSS products were associated with lower consumption of energy, sugar, and fat from those products [82]. However, fragmented approaches leave significant gaps, especially as companies shift to less regulated digital platforms [83].

Right-based, comprehensive regulations limiting children's exposure to marketing—and not just marketing targeting them directly—are essential. Such regulations should be grounded on internationally recognized children's rights, including the rights to equality and non-discrimination and privacy [84], along with stronger data protections [85], especially considering that digital marketing of unhealthy products relies on behavioral profiling and personal data. Limiting data collection is essential to protect children's privacy and prevent targeted advertising, addressing the structural drivers of such marketing at their source [85, 86]. As the technology industry increasingly shapes food environments, the application of anti-trust mechanisms also becomes increasingly relevant.

Restricting unhealthy food marketing alone is insufficient to achieve lasting improvements in diet quality and shift social norms. MPF-promoting communication should align with best-practice national dietary guidelines and move beyond information provision to strengthen food literacy, including functional, relational, and critical competencies that help children and adolescents navigate food systems

[87]. Public education campaigns can effectively promote MPFs only when implemented as part of broader structural strategies rather than as stand-alone short-term efforts [88, 89]. For example, Australia's LiveLighter campaign shows that sustained government-led messaging improves knowledge, behaviors, and support for regulation [90, 91]. Additionally, constant, large-scale advertising of MPF categories has been shown to increase consumption [92]. Other marketing interventions such as product placement, default options, and social norm cues can also promote healthy decisions [93].

Shifting the narrative from individual responsibility to systemic drivers of unhealthy diets—such as industry practices and government policies—is another critical communication strategy. Countermarketing campaigns can change behavior and build support for regulation, reinforcing the government's role in policy change [94]. These campaigns may be led by civil society and NGOs, as in Mexico's sugary beverage tax [95] and youth initiatives like UNICEF's Fix My Food and the United Kingdom's Bite Back [96, 97], or by state health departments, as in California's tobacco control [94] and Hawaii's anti-sugary beverage campaign [98].

The intersections between UPF-restrictive and MPF-enabling approaches in food-related communication might be a key strategy needed for food systems transformation. Marketing restriction policies have strengthened other interventions like warning labels and UPF taxes [99, 100], and they may reduce industry influence as well as amplify the impact of health communication. However, MPF-enabling communication faces challenges related to cost, sustainability, and equity, particularly in low- and middle-income countries. Innovative financing mechanisms, including earmarked revenues from UPF taxes [101], legal settlements [102], and sector-wide commodity promotion models [103] may help address these constraints. Leveraging community-based models, public infrastructure, and scalable digital tools may improve feasibility. Additionally, complementary regulatory strategies, such as taxing digital or out-of-home advertising, may also help rebalance food-related communication environments [104].

Building the Foundations for Cohesive Food Policy

Legal Foundations for Restricting UPFs and Enabling MPFs

Legal action is central to advancing policies that restrict UPFs and enable MPFs, helping to correct a long-standing

pro-UPFs policy environment. Law provides mechanisms to hold governments accountable for their role in creating and sustaining unhealthy food systems and to require corrective action. This can include challenges to overly complex procurement rules or to certain UPF tax breaks and subsidies. Accountability can extend to UPF corporations when products or practices contribute to population-level harm, as illustrated by recent litigation seeking restitution for health-related costs and changes in corporate conduct in San Francisco [105], building on similar efforts on the tobacco front [106].

Beyond accountability, legal action plays a critical role in defending policy progress. UPF companies frequently threaten or initiate litigation to delay or weaken pro-health regulations [107], often deterring regulatory action even when challenges ultimately fail. Experiences across countries illustrate how litigation can either reinforce or undermine regulatory authority [108, 109].

Rights-based legal frameworks increasingly shape these debates, emphasizing that governments are not only justified but required to act in response to the growing burden of NCDs. Rights enshrined in international and constitutional law give rise to legal obligations to restrict harmful products while ensuring access to nutritious, culturally acceptable foods [110]. For instance, the right to health encompasses underlying determinants such as food and education [111], while the right to adequate food requires sustained physical and economic access to nutritious diets [112]. Together, these rights and related obligations support the combination of UPF-restrictive with MPF-enabling approaches within and/or across policy domains, framing MPF-enabling policies as legally grounded requirements rather than discretionary options.

Framing food policies as rights-promoting also strengthens their legal defensibility.⁵ Courts commonly assess whether policies pursue legitimate objectives and whether they are suitable and proportionate to achieving these objectives, often weighing public health benefits against claims related to free enterprise or free speech. Addressing these questions requires clear policy objectives and benefits from robust, independent evidence on harms and effective solutions.⁶ Lawyers, researchers, and advocates play a key role in ensuring that policies are

evidence-informed, aligned with rights-based frameworks, and reflective of public interest articulated through civil society participation [113].

Advocacy and Coalition Building

Advocates play a critical role in articulating how these approaches can function cohesively, either through dual-function interventions within specific policy domains or through coordinated packages across domains. Meaningful civil society participation remains essential to ensure that public health priorities are not displaced by commercial interests [72].

Emerging evidence from integrated policy approaches that restrict UPFs while enabling MPFs is particularly valuable for advocacy. This growing body of experience provides a shared evidence base for advocates and researchers in diverse global settings who are pursuing food-environment reforms and seeking to advance policies that jointly support healthier dietary patterns. An intersectoral approach can further strengthen advocacy by integrating public health objectives with environmental sustainability, agricultural development, social protection, and poverty reduction objectives. Such integration broadens the rationale for MPF promotion and expands the political constituency supporting integrated food policy reforms, while helping ensure that policies address interconnected societal goals.

Public participation processes, including public comments and hearings, provide important opportunities to incorporate expert insights and lived experience into policymaking [114]. Engaging youth, caregivers, educators, and community members alongside technical experts can ground advocacy in everyday realities and strengthen policy legitimacy. Coalition-based advocacy also helps reach decision-makers, build public support, and counter industry interference throughout the policy process [113]. Sustained engagement, from policy design through implementation and enforcement, is essential to ensure that UPF-restrictive measures are complemented by strategies that enable healthier dietary patterns.

Cross-Cutting Research Priorities and Evidence Gaps

While promising examples of integrated UPF-restrictive and MPF-enabling policies are emerging across domains, evidence gaps remain. Strengthening this evidence base is essential to support effective policy design, inform legal and regulatory strategies, and sustain coordinated advocacy efforts. Table 1 summarizes priority research areas for advancing integrated policy approaches.

⁵ The standard of review and level of scrutiny applied will depend on the Court in question. While some courts may focus on suitability or effectiveness, others may assess also the necessity of the measure.

⁶ Depending on the court and its level of scrutiny, evidence may be drawn from domestic or international studies, using more or less strict methodologies. The need for evidence should arguably not be used to justify an excessively strict threshold that discourages governments from adopting innovative public-health measures.

Table 1 Priority research areas for integrated UPF-restrictive and MPF-enabling policies

Policy domain	Research areas for prioritization
School food and public procurement policies	- Assess short- and long-term impacts of integrated school and broader public food procurement policies on diet quality, health outcomes, and food systems, including effects on small-scale farmers and indigenous communities. - Examine adoption, implementation, enforcement, and policy sustainment of MPF-enabling procurement standards across schools and other public institutions, and across different governance contexts. - Develop and track process, implementation, and maintenance indicators for policies integrating UPF restriction and MPF enablement. - Evaluate how lessons from implementation in schools compare with and inform policy design in other public institutions, identifying facilitators, barriers, and equity implications across settings. - Investigate how comprehensive public procurement frameworks can be designed to align nutrition, sustainability, and local economic development goals, including mechanisms for scaling integrated UPF-restrictive and MPF-enabling standards across institutional sectors.
Fiscal policies	- Quantify the extent to which government funds are fueling UPF production and promotion through tax breaks and subsidies for UPF inputs. - Examine the real-world feasibility and supply-side responses to repurposing agricultural subsidies toward MPFs and identify structural barriers that may limit effective shifts in production. - Evaluate short-, medium-, and long-term dietary, health, and distributional impacts of combined UPF taxes and MPF tax breaks or subsidies, including effects on small-scale farmers and local food systems. - Study revenue allocation mechanisms, including soft earmarking, and their effectiveness in supporting MPF access and food system infrastructure over time.
Food labeling policies	- Examine whether front-of-package labeling indirectly shifts purchases toward MPFs, under what food environment conditions, and whether these effects are sustained over time. - Assess unintended reformulation responses to UPF-restrictive policies, including shifts in additive use, and evaluate the effects of additive-related warnings on product formulation and long-term consumer behavior. - Investigate how restrictions on health and nutrition claims influence consumer understanding and prevent health halo effects on UPFs.
Marketing regulation and promotion policies	- Identify affordable, culturally relevant, and equitable communication strategies that integrate UPF marketing restrictions with MPF-enabling promotion and assess their scalability and sustainability. - Assess how integrated communication strategies influence norms, preferences, and consumption patterns over time. - Examine whether industry-led, category-based promotion within the MPF sector (e.g., vegetables or legumes) can encourage healthier choices. - Evaluate the long-term effectiveness and equity impacts of marketing interventions such as product placement, default options, and social norm cues.

Conclusion

Integrated policy actions can both reduce the presence and influence of UPFs and support MPF consumption. Meaningful progress requires more than limiting unhealthy products; it also requires creating legal, economic, and social conditions that make MPFs available, accessible, and desirable. Depending on the policy domain, MPF-enabling and UPF-restrictive components can be integrated within a single policy or advanced through distinct but complementary policies that collectively reshape food environments. Combining these approaches within and across policy domains can strengthen their overall impact and support more coordinated food system transformation. Achieving and sustaining these changes depends on legal strategies and sustained advocacy, which underpin the adoption, implementation, and durability of integrated policy approaches.

The global penetration of UPFs, their adverse health impacts, and the displacement of minimally processed diets

demand timely, coordinated action. The challenge now is to scale, adapt, and strengthen the integration of MPF-enabling with UPF-restrictive approaches, centering health, equity, and sustainable food systems.

Authors' Note

In line with calls to advance language equity in health research [115], we provide a full Spanish translation of this review as supplementary material to support equitable evidence access and policy uptake beyond English-speaking audiences.

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Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s13679-026-00724-5>.

Acknowledgements The authors thank Emily Busey (Global Food Research Program, University of North Carolina at Chapel Hill) for exceptional assistance with graphics support.

Author Contributions L.S.T., S.W.N., and J.L.A. conceptualized the study. J.L.A. managed the project, compiled the manuscript, and prepared the table. All authors contributed to writing sections of the manuscript, critically reviewed and revised the text for important intellectual content, and approved the final manuscript.

Data Availability No datasets were generated or analysed during the current study.

Declarations

Human and Animal Rights and Informed Consent This article does not contain any studies with human subjects performed by any of the authors.

Competing interests The authors declare no competing interests.

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