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Political economy of agricultural policy and practices in Nepal: Implications for smallholder agriculture and rural food systems transformation

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ABSTRACT

This study aims to generate policy-relevant insights to support inclusive, equitable, and sustainable agriculture and rural food systems in Nepal. Applying a political economy lens and systematic policy mapping approach, the study analyzed major policies according to their direct influence on agriculture and rural food system, complemented by qualitative fieldwork in western Nepal involving 196 respondents through interviews and focus groups discussions. The numerical analysis of various policies reveal that of 26 policies reviewed, 19 policies (73%) target food supply chains, compared to 10 on food environments (38%), seven on diets (27%), three on individual factors (12%), and just one (4%) on consumer behavior. This demonstrates a strong production-centric policy orientation. While legal discourse increasingly embraces rights-based frameworks through the Constitution of Nepal, effectiveness is significantly constrained by political economy factors such as electoral incentives, bureaucratic discretion, and power relations among stakeholders leading a short-term, distributive, and credit-claimable interventions such as seed, fertilizer, mechanization, and small-scale irrigations supports over systemic reforms in Nepal's agriculture and food systems. The study concludes that transforming Nepal's rural food systems requires shifting beyond production-focused paradigms toward an integrated food system approach. This requires strengthening policy-space for institutional reforms, cross-sectoral coordination, targeted smallholder assistance, and robust regulations, while realigning political and bureaucratic incentives to ensure systemic and long-term change within Nepal's food systems. This study contributes to the literature by integrating political economy analysis with a food systems framework to examine how policy processes, power relations, and institutional incentives shape food system outcomes in Nepal.

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INTRODUCTION

The agricultural sector serves as a cornerstone in Nepal's economic landscape which has been playing a pivotal role in ensuring food security, livelihoods, and overall economic development (NRB, 2023; Khanal et al., 2020; World Bank, 2018). According to the latest National Sample Census of Agriculture (NSCA) (2021/22), agricultural households constitute 62 percent of the total households contributing 25.2% to the national gross domestic product (GDP) (NCA, 2022; National Seed Vision, 2013; National Adaptation Plan, 2021; National

Irrigation Policy, 2014; Nepal Trade Integration Strategy, 2016; NRB, 2024). Beyond its economic contributions, agriculture is a vital foundation for employment, social stability, and overall prosperity particularly within rural areas of Nepal. The development of this sector is also essential for achieving the "Prosperous Nepal, Happy Nepali" vision of the government's long-term economic strategy (FY2020 to FY2044) launched via the 15th Periodic Plan (2019/20–2023/24) and the 16th Periodic Plan (2024/25–2028/29). While agriculture's contribution to Nepal's GDP declined from 36% in 2000 to 25.2% in

2024 (NRB, 2024), the sector remains a fundamental driver of inclusive and broad-based economic growth and food security. Despite its central importance, actual performance has remained stagnant. This lack of progress is evidenced by sluggish productivity growth, an increasing reliance on food imports and remittances, heightened price volatility, and persistent vulnerability among smallholder farmers (Gadal et al., 2024; Adhikari et al., 2023). These trends highlight a critical development challenge with implications for food security, rural livelihoods, and economic resilience. Although government agricultural development policies provide the essential frameworks and action plans required to achieve public objectives (Oskam et al., 2010), contemporary scholarship further argues that the success of these policies in improving the living conditions and incomes of smallholder farmers is fundamentally contingent upon the presence of effective institutions and adequate capital investment (Khanal et al., 2020).

Since the inception of first five-year plan in 1956, Nepal has implemented successive agricultural strategies to enhance productivity, commercialization, and food security. Over the past seven decades, this policy evolution has included 15 periodic plans including the Agriculture Perspective Plan (1995) for the years 1995–2015 and the current Agriculture Development Strategy (2015) for the years 2015–2035 and 16th Five Year Plan (2024/25–2028/29). Key programmatic interventions, such as the National Agriculture Modernization Project (NAMP, 2024), further support these objectives. More recently, the inclusion of the right to food in the Constitution of Nepal, 2015, alongside the expansion of nutrition-sensitive planning and social protection policies, indicates a gradual paradigm shift toward a comprehensive food systems orientation (National Food and Nutrition Security Policy: NFNSP, 2023; Multi-Sector Nutrition Plan: MSNP, 2023). Despite this policy architecture, agricultural performance and food system outcomes remain weak and uneven across regions and social groups. Smallholder farmers continue to face land fragmentation, limited access to inputs and markets, climate vulnerability, and institutional constraints (Khanal et al., 2020). These persistent challenges suggest that policy effectiveness cannot be understood solely through technical lens. Instead, inclusive, equitable and sustainable outcomes are shaped by political economy dynamics mainly electoral and bureaucratic incentives, institutional capacity, and power relations among stakeholders (Grindle, 2017; Timmer, 1988). While previous studies have reviewed agricultural policies, systematic analysis linking policy design and implementation to food system components remains limited. Addressing this gap, this study applies a political economy lens and systematic policy mapping, building on frameworks by Mockshell et al. (2023) and Khanal et al. (2020), to assess how agricultural policies influence food supply chains, food environments, individual factors, and consumption-related outcomes with particular attention to implications for smallholder agriculture and rural food systems. Based on this, the aim of the study is to generate policy-relevant insights to support more inclusive, equitable, and sustainable agriculture and food systems in Nepal, drawing policies analysis coupled with illustrative evidences gathered from selected western Terai districts namely Kailali, Rupandehi, and Surkhet under federal governance structures. This study contributes to the literature by integrating political economy analysis with a food systems framework to examine how policy processes, power relations, and institutional incentives shape food system outcomes in Nepal.

CONCEPTUAL AND ANALYTICAL FRAMEWORK

Political economy perspective

Political economy analysis emphasizes that policies are shaped not only by technical objectives but also by political incentives, institutional arrangements, and power relations among the actors (Besley & Case, 1995; Grindle, 2017). In agriculture, electoral incentives often encourage governments to prioritize visible, short-term interventions such as subsidies, input distribution, commodity and geography focused commercialization programs and small infrastructure development, while longer-term institutional reforms receive less attention (Timmer, 1988). Bureaucratic incentives including career growth, budget control, and risk avoidance further influence how policies are implemented on the ground (Wilson, 1989). In Nepal, these dynamics have been further intensified following the adoption of federal restructuring through Constitution of Nepal (2015), which introduced a three-tier system of government at the federal, provincial, and local levels. While federalism has expanded the scope for decentralized and context-specific agricultural interventions, it has also increased the number of political, bureaucratic and business actors and interest groups involved in policy formulation and implementation. During Key Informant Interviews (KIIs) and Focus Group Discussion (FGDs) respondents informed that competitive electoral politics at the federal, provincial, and local levels have increased political involvement in bureaucratic processes, particularly in the administration of agricultural subsidy programs which are frequently leveraged as instruments for political support. Respondents also emphasized that electoral incentives often dictate the targeting and distribution of subsidy resources, shifting the focus from technical merit to gaining wider voter support from rural agricultural communities. As a result, policymakers and elected representatives often prioritize interventions that generate visible, quantitative, and short-term results such as input subsidies, distribution programs, and small-scale infrastructure projects limiting the policy-space for longer-term institutional reforms, investments in governance improvement, agriculture research and extension, and system-wide transformation.

Agriculture and food systems perspective

HLPE (2017) and Marshall et al. (2021) conceptualize a food system as encompassing all elements and activities related to the production, processing, distribution, preparation, and consumption of food, along with their socio-economic, environmental, and institutional impacts. The framework emphasizes that food security and nutrition outcomes are not determined by agricultural production alone but emerge from complex interactions among food supply chains, food environments, and individual factors and consumption behaviors. This framework highlights that agricultural policies influence not only productivity and incomes but also food environments, consumer behavior, dietary diversity, and nutritional outcomes. Integrating political economy with food system perspective allows analysis of how governance and incentive structures shape food system pathways and outcomes. Figure 1 conceptualizes how political economy factors such as actors, interests, power relations, institutions, and governance shape the design and implementation of agricultural policies and influence food systems outcomes. It illustrates that policy priorities, resource allocation, and implementation effectiveness are driven not only by technical considerations but also by political incentives, bureaucratic description, and institutional dynamics. These policies affect key components of the food system, including food supply chain, food environments, individual traits and

consumer behavior, ultimately shaping food security, nutrition, livelihoods, and environmental sustainability. The framework emphasizes the importance of integrating political economy

analysis into agricultural policy to better understand its broader impacts on food systems.

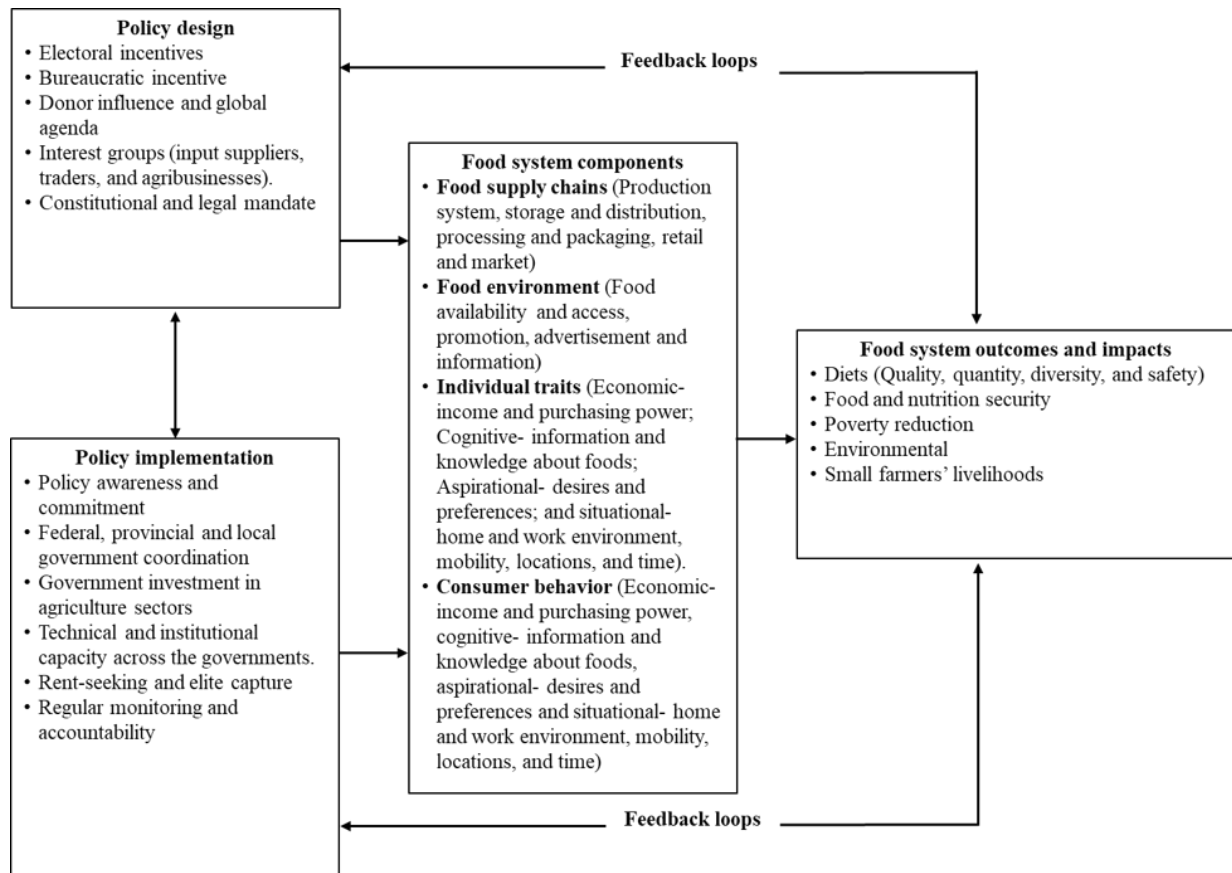


Figure 1. Political economy of agriculture policy design and implementation and its effect on food systems (Author's conceptualization, adapted from Mockshell et al. (2023); Marshall et al. (2021); and HLPE (2017).

MATERIALS AND METHODS

This study adopts a qualitative policy review approach similar to that used by Mockshell et al. (2023) and Khanal et al. (2020) and primary data collection using KIIs, FGDs, and observations. Insights from Gadal et al. (2024) and Adhikari et al. (2023) on agricultural growth, budget trends, and agricultural trade performance and overall impacts on agriculture transformation were used to contextualize policy outcomes. Data sources include constitutional provisions, national acts, sectoral policies, periodic plans, and peer-reviewed literature related to agriculture and food systems. Policy documents were collected from official government portals, physical access, legal repositories, and academic databases. To facilitate analysis, policies were categorized into five thematic domains: (i) food supply chains, (ii) food environments, (iii) individual traits (iv) consumer behavior, and (v) diet. A week-long qualitative studies were undertaken in Bardagoria (Kailali district), Lek Beshi (Sukhet district), and Suddhodhan Rural Municipalities (Rupandehi district) in western Nepal (Figure 2), involving fieldwork to elucidate insights into local agricultural systems, political economy viewpoints, local actors' perspectives, and community dynamics. Primary data were collected by the use KIIs, FGDs, and direct obser-

vations, engaging with a diverse array of stakeholders such as farmers, traders, municipal leaders, and government officials. A total of 196 respondents were contacted for the FGD, KIIs, and observations using the snowball sampling method.

RESULTS AND DISCUSSION

Policy overview relevant to agriculture and rural food system in Nepal

Table 1 summarizes major constitutional provisions, laws, and sectoral policies relevant to agriculture and food system transformation in Nepal and maps their areas of influence across key food system components and sub-components. The table organizes policy provisions according to five broad dimensions: food supply chains, food environments, individual traits, consumer behavior, and diets. The table is intended to provide a structured overview of the policy landscape and their direct influence on the food systems rather than an assessment of implementation effectiveness. It captures the scope and orientation of existing policy instruments and highlights the extent to which different components of the food system are addressed within Nepal's constitutional, legal, and sectoral policy frameworks. By presenting policy coverage in a consolidated format,

the table serves as a reference point for the subsequent analytical sections. The following subsections draw on this mapping to examine patterns of policy emphasis, gaps, and political econ-

omy constraints influencing agriculture and rural food systems transformation in Nepal.

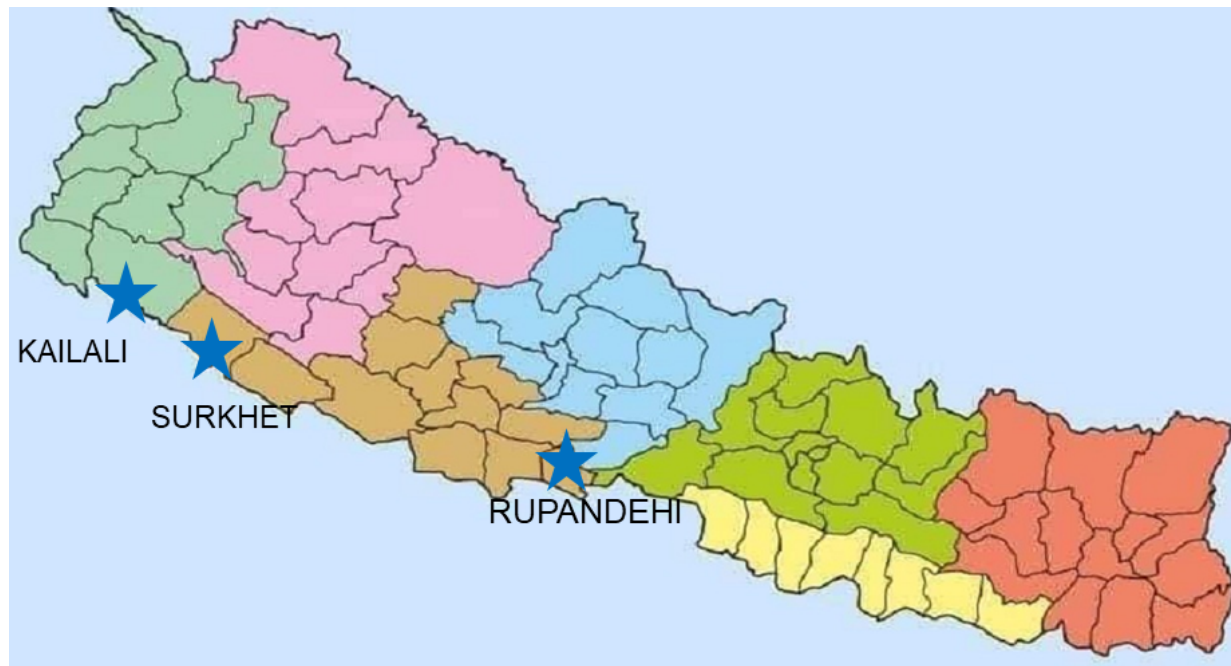


Figure 2. Map of study locations in Western Nepal (Kailali, Surkhet, and Rupandehi districts).

Table 1. Policy influence mapping on agriculture and rural food systems in Nepal.

Policy provisions	Food supply chains	Food environments	Individual traits	Consumer behavior	Diets
The Constitution of Nepal (2015)	—	1, 2	—	1	—
Right to Food and Food Sovereignty Act (2018)	—	1, 2, 3	—	—	3
Food Hygiene and Quality Act (2024)	3, 4	3, 4	—	—	4
Consumer Protection Act (2018)	4	1, 2, 3, 4	—	—	4
Food Act 2023 (1967)	—	3	—	—	1
Nepal Standards (Certification Mark) Act (1980)	3, 4	3	—	—	4
Cooperatives Act 1992 (First amendment 2000)	1, 2, 3, 4	1	1	—	—
Plant Quarantine and Protection Act 2007 (First Amendment- 2022)	1	—	—	—	—
The Local Government Operation Act (LGOA) 2017	1, 3, 4	1	—	4	—
Seed Act (1988), Seed Regulation (1997), National Seed Policy (1999) and National Seed Vision (2013 to 2025)	1	—	—	—	—
National Food Corporation Regulation (1997)	3, 4	—	—	—	—
Pesticides Act (1991) and Fertilizer (Control) Order (1999)	1	3	—	—	—
Land Act (1964) and Land Acquisition Act (1977) and Land Use Policy (2015)	1	—	—	—	—
Agriculture Perspective Plan (APP-1995 to 2015)	1	—	1	—	—
Agriculture Development Strategy (ADS)	1, 3, 4	—	1	—	—
National Agriculture Modernization Project (NAMP- 2016 to present)	1, 3, 4	1	—	—	—
National Food and Nutrition Security Policy (NFNSP- 2023)	—	1	—	—	1, 2, 3
Multi-Sector Nutrition Plan (MSNP III- 2023 to 2030)	—	—	—	—	1, 2, 3, 4
National Agricultural Policy (NAP-2004)	1	1	—	—	—
National Irrigation Policy (2014)	1	1	—	—	—
Climate Change Policy of Nepal (2019)	1	—	—	—	—

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Table 1. continued...

National Adaptation Programme of Action (NAPA-2010)	1	—	—	—	—
Nepal Trade Integration Strategy (NTIS-2016)	3, 4	—	—	—	—
Fifteenth Periodic Plan of Nepal (2019/20–2023/24)	1, 3, 4	—	—	—	—
Sixteenth Periodic Plan of Nepal (2024/25–2028/29)	1, 3, 4	—	—	—	—
Agriculture, Livestock and Medicinal Herb Insurance Directive (2077)	1	1	—	—	—

Source: Authors' compilation based on desk reviews of policy provisions, KIs, and literatures reviews. Note 1: An asterisk (*) is used to indicate whether a given policy provision has a direct mandate-level influence on a specific food system component and sub-components. Note 2: Food supply chains (1. Production systems and input provisions; 2. Storage and distribution; 3. Processing and packaging; 4. Retail and marketing). Food environments (1. Availability-Types and diversities of foods, 2. Affordability- food prices in relation to food quality; 3. Food quality and safety; and 4. Vendor properties- types and characteristics of retail outlets). Individual traits (1. Economic- income and purchasing power; 2. Cognitive- information and knowledge about foods; 3. Aspirational- desires and preferences; 4. Situational- home and work environment, mobility, locations, and time). Consumption behavior (1. Food acquisition; 2. Meal preparation; 3. Consumptions; 4. Storage, disposal, and recycle). Diets (1. Quality; 2.Quantity 3. Diversity 4. Safety)

Policy emphasis on food supply chains

Of the 26 national policies reviewed, 19 policies (73%) have a direct influence on food supply chains, largely emphasizing production through input provisions and commercialization. In comparison, only 10 policies (38%) address food environments, primarily through fragmented measures related to food safety, quality standards, and market regulation. Policy attention to downstream dimensions remains minimal. Just three policies (12%) engage with individual traits such as knowledge, preferences, and agency, and only one policy (4%) directly influences consumer behavior. Policies with on dietary outcomes are also limited, with seven policies (27%) incorporating nutrition or diet-related objectives among others. This analysis of Nepal's policy landscape reveals a significant imbalance in how different food system components are prioritized. The strongest and most consistent policy influence is concentrated in food supply chains, particularly productivity enhancement, input use, irrigation, mechanization, and commercialization. Core programmatic instruments such as the NAMP, and a range of seed, fertilizer, pesticides, land, mechanizations and irrigation policies exert wide-ranging influence over food supply chains. This reflects Nepal's long-standing development paradigm that views agricultural development almost exclusively through the lens of increasing productivity and market output. Similar production-oriented policy patterns have been observed in many low- and middle-income countries, where agricultural strategies continue to prioritize supply expansion over broader food system outcomes such as diets, equity, and sustainability (Fanzo et al., 2021; FAO et al., 2023).

From a political economy perspective, this production-centric orientation is not merely technical but incentive-driven at both the political and bureaucratic spheres. Input subsidies, small-scale infrastructure investments, and commodity-focused programs somehow generate visible and credit-claimable outputs, aligning closely with electoral incentives, bureaucratic performance metrics and rent-seeking. As a result, these policy interventions are politically and bureaucratically attractive, even when evidence of their inclusiveness and long-term systemic and sustainable change remains questioned. Recent global food systems analyses similarly note that policy incentives often favor politically visible production support while underinvesting in food environments, nutrition, and consumer-oriented interventions (HLPE, 2020).

Limited attention to food environments

In contrast, food environment components including food availability, affordability, safety, quality, and market are governed by a more recent set of legal instruments, notably the Right

to Food and Food Sovereignty Act (2018), Land Act (1964), Land use policy (2015), Land Acquisition Act (1977), Local Government Operation Act (2017), Consumer Protection Act (2018), Climate Change Policy of Nepal (2019), Cooperatives Act (1992), Food Act (1967), Pesticides Act (1991), Seed Act (1988), Seed Regulation (1997) and Food Hygiene and Quality Act (2024). While these laws establish strong commitments to consumer protection and public health and food quality, the mapping shows that their policy influence is comparatively fragmented and less deeply institutionalized at the sub-national level government than supply chain side interventions. This imbalance reflects weak implementation incentives and institutional fragmentation. Regulation of traders, processors, and retailers often entails political costs and administrative risks, particularly in contexts where enforcement capacity is limited and market actors hold economic and political influence. Global food systems literature similarly notes that governance of food environments especially price regulation, quality enforcement, and market restructuring tends to fall behind production support due to diffuse public benefits from program delivery (HLPE, 2020; Swinnen, 2021; FAO et al., 2023). Consequently, food environment governance remains uneven, constraining the translation of increased agricultural production into safe, affordable, and nutritious food for all. Importantly, Nepal's constitutional guarantee of the right to food and food sovereignty implies that citizens are entitled not only to sufficient food production but also to accessible, safe, culturally appropriate, and affordable food (Constitution of Nepal, 2015). However, the limited institutional depth of food environment regulation suggests that constitutional commitments remain only partially operationalized in practice. Without stronger regulatory and accountability mechanisms, production gains are unlikely to ensure meaningful realization of food rights.

Marginalization of consumer behavior in policy design

The mapping also indicates that consumer behavior is addressed largely indirectly in Nepal's policy framework. Economic determinants such as income support through social protection programs and agricultural insurance receive few policy attention, particularly for vulnerable groups such as smallholder farmers. However, cognitive, aspirational, and situational drivers of food choice, including nutrition knowledge, dietary preferences, time constraints, and physical access to markets, are weakly reflected across policies. From a food systems perspective, recent global scholarship emphasizes that consumer agency, information, and affordability are central to dietary transformation and nutrition outcomes (Fanzo et al.,

2021; FAO et al., 2023). Policies that neglect demand-side determinants risk poverty and structural inequalities in access to nutritious food. Nepal's policy mapping suggests that consumer-oriented governance and consumer right to food remains underdeveloped and lack institutional and investment capacity of public agency.

From a political economy perspective, this marginalization is not incidental. Supply-side interventions such as input subsidies and infrastructure investments generate visible and credit-claimable outputs, aligning with electoral incentives and bureaucratic performance metrics. In contrast, interventions targeting behavioral change, nutrition education, or consumer empowerment yield longer-term and less tangible political returns. As observed in comparative political economy studies, governments frequently prioritize distributive and infrastructure-based agricultural spending over systemic reforms affecting consumption and market governance (Grindle, 2017; Swinnen, 2021; Mogues & Rosario, 2016). This gap also sits worriedly with the constitutional vision of right to food and food sovereignty, which supposes informed citizen participation and agency in shaping food systems. Without policy attention to consumer behavior and agency, the participatory dimension of right to food and sovereignty remains limited.

Weak integration of dietary diversity and nutrition objectives

Policies explicitly targeting dietary diversity and nutrition, such as the National Food and Nutrition Security Policy (NFNSP, 2023) and the Multi-Sector Nutrition Plan (MSNP, 2023), appear in the mapping as cross-cutting frameworks rather than core drivers of food system governance. Although these policies articulate nutrition-sensitive dietary objectives, they remain weakly integrated with production and market-oriented interventions. This disconnect reflects a broader structural misalignment of incentives across sectors. Agricultural policies prioritize staple crop production and commercialization, while nutrition outcomes are largely delegated to health and social sectors with limited influence over production systems and food markets. Recent global assessments highlight that siloed governance structures undermine efforts to link agricultural transformation with dietary quality and nutrition security (HLPE, 2020; Fanzo et al., 2021). Without cross-sectoral integration, increases in agricultural output do not necessarily translate into improvements in dietary diversity or micronutrient adequacy (FAO et al., 2023). From a constitutional standpoint, the right to food entails not merely caloric sufficiency but access to adequate and nutritious food. However, when nutrition objectives remain institutionally peripheral to agricultural policy, the operationalization of this right remains incomplete. The persistence of supply-focused incentives within agricultural governance thus reinforces a gap between normative commitments and policy practice.

Food governance and political economy constraints

Food governance emerges as a cross-cutting but unevenly operationalized domain across the mapped policies. Federal restructuring has expanded the role of provincial and local governments in agriculture and food system governance, creating opportunities for context-specific interventions. However, the mapping highlights persistent governance constraints, including fragmented mandates, varied subnational capacity, and weak accountability mechanisms. Global food systems scholarship underscores that effective transformation requires coordinated governance across multiple levels and sectors,

integrating production, markets, nutrition, and environmental sustainability (HLPE, 2020). Yet multi-level governance arrangements often introduce coordination challenges and blurred accountability, particularly in newly decentralized systems. In Nepal, competitive electoral politics across three tiers of government may further reinforce distributive and short-term interventions over systemic regulatory reforms. From a political economy perspective, fragmented mandates dilute responsibility for realizing the constitutional right to food and food sovereignty. While the constitutional framework establishes normative clarity, institutional fragmentation and incentive misalignment constrain implementation. Without stronger coordination mechanisms, transparent accountability systems, and aligned fiscal incentives, food system governance risks remaining supply-driven and administratively compartmentalized.

Uneven and fragile progress in Nepal's food system transformation

Building on the political economy dynamics discussed in Sections 4.1–4.6, emerging evidence suggests that Nepal's agricultural policy trajectory has contributed to uneven and fragile food system outcomes. The interaction of electoral incentives, short-term subsidy-oriented programs, and fragmented institutional implementation has prioritized visible production support measures over long-term structural transformation. As a result, the structural role of agriculture in the national economy has continued to decline, with the sector's contribution to GDP falling from 33.4% in 2010 to around 25.2% in 2024/25 (NRB, 2024), while public investment in agriculture has remained persistently low, averaging about 2.9% of the national budget (Gadal et al., 2024). These trends reflect broader policy priorities that emphasize immediate political returns rather than sustained sectoral competitiveness. These political and institutional incentives have also shaped input and trade dynamics within the food system. Subsidy-driven programs often promoted as quick policy responses to farmers' demands for political benefits have reinforced dependence on imported agricultural inputs, while domestic productivity gains have remained limited. Consequently, Nepal's food import dependence has expanded rapidly, with the value of food imports increasing from approximately USD 615 million in 2010/11 to an estimated USD 2.6 billion in 2024/25 (Department of Custom, 2024). Similarly, national expenditure on core agricultural inputs such as fertilizer, improved seeds, and farm machinery has risen from about USD 140 million to more than USD 510 million during the same period, representing a 264% increase (ibid). This pattern illustrates how existing policy incentives have strengthened external reliance rather than fostering resilient domestic production systems.

Consistent with this policy trajectory, improvements in food security and nutrition outcomes have remained uneven across social groups and regions. While national indicators show progress, malnutrition and food insecurity persist disproportionately among marginalized communities particularly Dalits and Muslims and in geographically remote areas such as Karnali and Sudurpaschim provinces (Adhikari et al., 2021). Limited access of smallholders and disadvantaged groups to policy benefits, weak food quality and safety oversight, and insufficient consumer-oriented food policies further illustrate how institutional and policy incentives translate into uneven food system transformation (Adhikari et al., 2021; FAO, 2021). Together, these outcomes reinforce the broader argument of this study that Nepal's agricultural policy regime has struggled

to align political and institutional incentives with inclusive, resilient, and nutrition-sensitive food system transformation.

Conclusion and policy implications

This study concludes that Nepal's agricultural policy framework remains strongly production-centric, with the majority of policies targeting food supply chains while comparatively limited attention is given to food environments, consumer behavior, and dietary outcomes. Although policy narratives increasingly reflect rights-based and food systems perspectives, implementation continues to be shaped by political economy dynamics. Electoral incentives, bureaucratic priorities, and fragmented institutional mandates tend to favor short-term, visible, and distributive interventions rather than coordinated and systemic reforms. As a result, policy influence across the broader food system remains uneven. These findings suggest that meaningful transformation of Nepal's rural food systems requires moving beyond productivity-led approaches toward a more integrated food systems perspective. Strengthening cross-sectoral coordination, expanding policy space for institutional reform, and improving regulatory and accountability mechanisms are essential. Greater attention to smallholder inclusion, food environments, and nutrition outcomes along with realigning political and bureaucratic incentives will be critical to achieving more resilient, equitable, and sustainable food system outcomes in Nepal.

DECLARATIONS

Author contribution statement: Conceptualization: N.G. and D.D.; Methodology: N.G., D.D.; Software and validation: N.G., D.D. P.B.N and N.D.; Formal analysis and investigation: N.G. and D.D.; Resources: N.G.; Data curation: N.G. and D.D.; Writing—original draft preparation: N.G, N.D., D.D. and P.B.N.; Writing—review and editing: N.D., D.D. and P.B.N.; Visualization: N.G., N.D., D.D. and P.B.N.; Supervision: D.D., ND and P.B.N.; Project administration: N.G. All authors have read and agreed to the published version of the manuscript.

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Ethics approval: This study was conducted in view of the institutional ethical guidelines and does not harm the human participants.

Consent for publication: All co-authors gave their consent to publish this paper in AAES.

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