



Institutional Reforms for Strengthening Agricultural Extension under Federal Governance in Nepal

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Abstract

Agricultural extension plays a crucial role in enhancing productivity and livelihoods, and its effectiveness in Nepal is increasingly shaped by the country's transition to a federal governance system. This paper assesses institutional reforms for strengthening agricultural extension under federal governance in Nepal. This study used a library method for exploring decentralized policies and programs as well as devolved power/jurisdictions to the local government. The study found that the timeline of extension development shows a gradual change in historical context following the adoption of the federal system. Key features of federalization include expanded farmer engagement, improved access to resources, and the capacity to customize policies to local requirements. Federalization has provided the opportunity for farmers' participation and a bottom-up approach for planning agricultural extension programs. However, obstacles exist, such as institutional inefficiencies, unclear power structures, and scarcity of human resources at the local level. This paper highlights the importance of increased institutional capacity of the local government. Therefore, the government must strengthen local capacity through training and technology, foster multi-stakeholder coordination, and implement participatory, evidence-based planning to ensure effective, inclusive, and sustainable agricultural extension services in a federal context.

Keywords: agricultural extension, federal governance, institutional reform, local government capacity

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1. Introduction

Extension has supported communities in maintaining their quality of life by addressing their problems and challenges (Nederlof et al., 2011). Extension or advisory services provide need- and demand-based knowledge and skills to farmers to improve their livelihoods and standard of living (Qamar, 2007). The growing significance of standards, certification, and food security, along with the expansion of nonfarm employment in rural areas and agricultural enterprises, are addressed with the assistance of extension services (Khanal et al., 2023). Since the 1950s, the Nepalese government has implemented a variety of agricultural extension models and strategies, with or without donor support (Upreti & Shivakoti, 2019).

Nepal has experimented with several extension methods, with mixed results, including Projectization, Farmer Field Schools, Block Production Programs, Tuki System, Training & Visit system, Integrated Rural Development Projects, Public-Private Partnerships, and group approaches (Ghimire, 2021). Every federal nation has its own levels of administration; Nepal became a federal nation in 2015 with the adoption of a democratic, republican, and inclusive constitution. Three tiers of government—federal, provincial, and local—were established under the constitution, each with divided and independent authority (Timsina et al., 2018). The Nepalese constitution assigns research and development powers to the federal and provincial levels and delegates agricultural extension services to the local level.

Nepal adopted federalism with the establishment of a three-level government, each with distinct concurrent and exclusive powers for the distribution of authority at the local level (Burlakoti & Nettle, 2024). This three-tiered system has created new opportunities for forming agricultural policies, particularly at the provincial and village levels, supporting a bottom-up strategy for the delivery of agrarian extension services within Nepal's restructured governance framework (Tamang et al., 2020). The establishment of a federal government grounded on principles of law, governance, and equitable power distribution encourages demand-driven, participatory agricultural planning. However, due to a lack of coordination between different governmental levels, insufficient long-term planning, and limited financial resources, Nepalese extension service delivery continues to face challenges in adapting to the changing context.

Despite Nepal's long history of agricultural extension, little is known about how federal governance affects service delivery, coordination, and local participation. This study addresses these gaps by assessing institutional reforms and their impact on effective, demand-driven extension services. The purpose of this study is to examine institutional reforms and challenges in strengthening agricultural extension under Nepal's federal governance system.

2. Method

This study employed a library-based research method (George, 2008) to explore decentralized policies and programs, as well as devolved powers and jurisdictions granted to local governments. The review primarily includes: the Constitution of Nepal (2015); Nepal Agriculture Policy (2004); Nepal Agriculture Extension Strategy (2007); Agriculture Development Strategy (2015–2035); the Civil Service Act; Ministry of Agriculture and Livestock Development documents; Provincial and Local Government Agricultural Guidelines; and reports from local governments. These government documents are considered authentic and reliable sources because they are officially published and provide verified information on policies, strategies, and institutional frameworks. The following sections present findings on **Extension and Federalization**.

3. Extension and Federalization

Political and institutional reforms played a crucial role in the commercial transformation of the agriculture sector. Since the 1990s, agriculture extension has been looked at by the government as a mainstream program to help the agricultural sector. Furthermore, the fundamental reform of the political and institutional framework in 2017 was brought about by the ratification of a new constitution in 2015. The establishment of several institutions under different governments has resulted in issues with redundant operations, inadequate delivery methods, and effective local agriculture extension system implementation. Before federalism, selected local government representatives who were aware of the needs and demands at the grassroots level still faced a gap between government bodies and citizens. Table 1 shows the extension's shift after federalization.

Table 1 *Extension's Shift afterwards Federalization*

Characteristics	Prior to Federalism	Changes after Federalism	Impacts
Administration	5-Development Region , 75-districts, 3915- VDCs and 58-municipalities	Central Government, State Administration (7), Districts (77), Local Government (753)	The local authority struggled to manage financial and human resources.
Implementation of Local bodies	Controlled through administrators to the Ministry of Foreign Affairs and Local Development	Elected people from elections	Organize the needs of the local farmers with the national agriculture priority

Characteristics	Prior to Federalism	Changes after Federalism	Impacts
Agriculture program policy	Nationally established overall policies and plans, with Agriculture Extension reaching district-level DDCs, DADOs, and DLSOs	Different exclusive and concurrent rights are granted to local, state, and federal governments. Specifically, the local government has acquired administration and operation authority over agriculture extension	The capacity to prepare the plan, policy and program at local government is comparatively weak.

Source: Kyle and Resnick (2019)

After federalization, Nepal’s agricultural extension system shifted from a centralized structure of five development regions and 75 districts to a three-tier system comprising federal, state, and 753 local governments. Local bodies, now elected, gained the authority to organize farmers’ needs and manage extension programs, replacing the previous administrator-led system. While this devolution increased local participation and responsiveness, many local authorities continue to face challenges in planning, resource management, and effective implementation of extension policies. Similarly, in Nepal’s federalized agricultural system, institutions are organized across three levels as presented in Table 2.

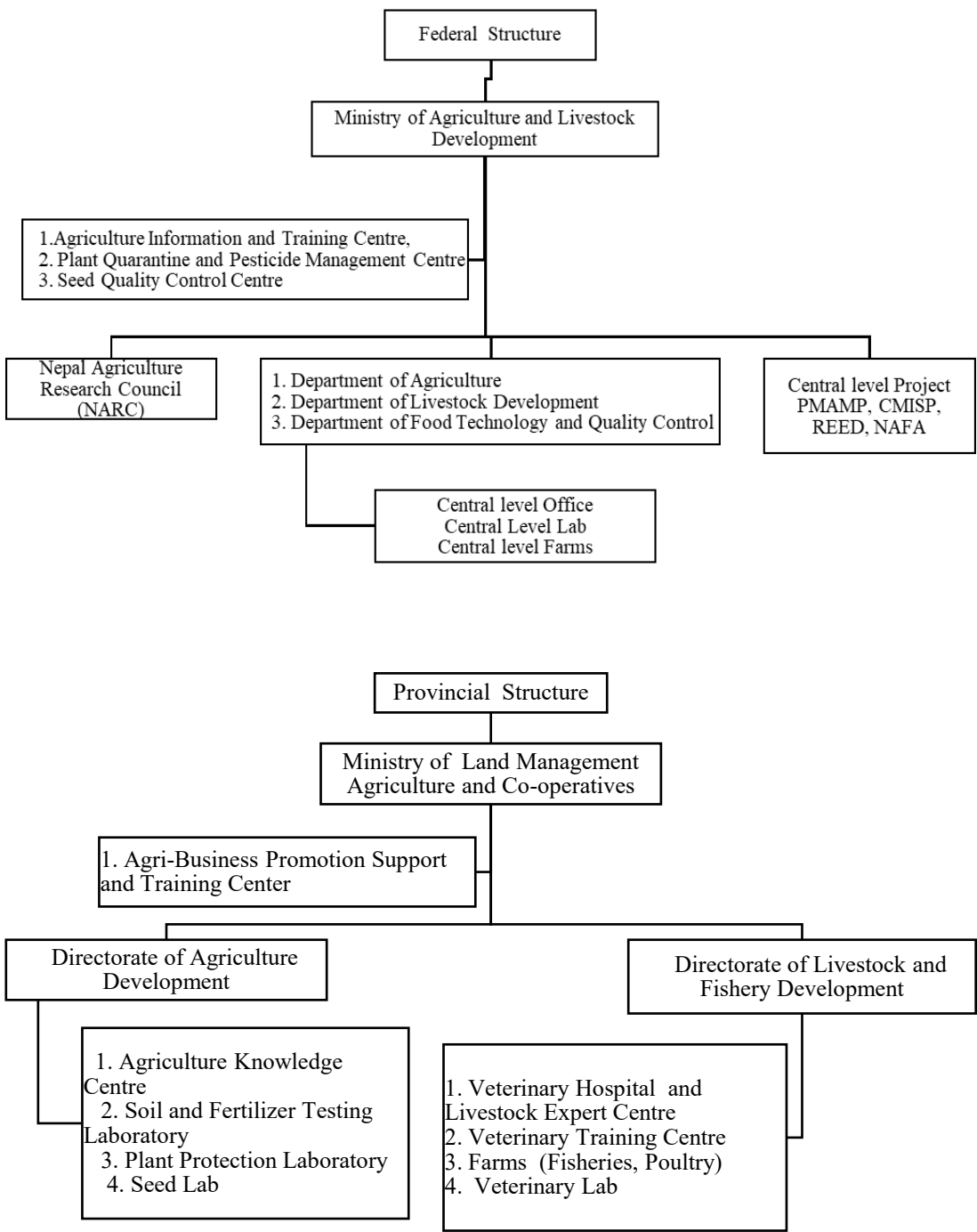
Table 2 *Institutions of Administration in Federalization*

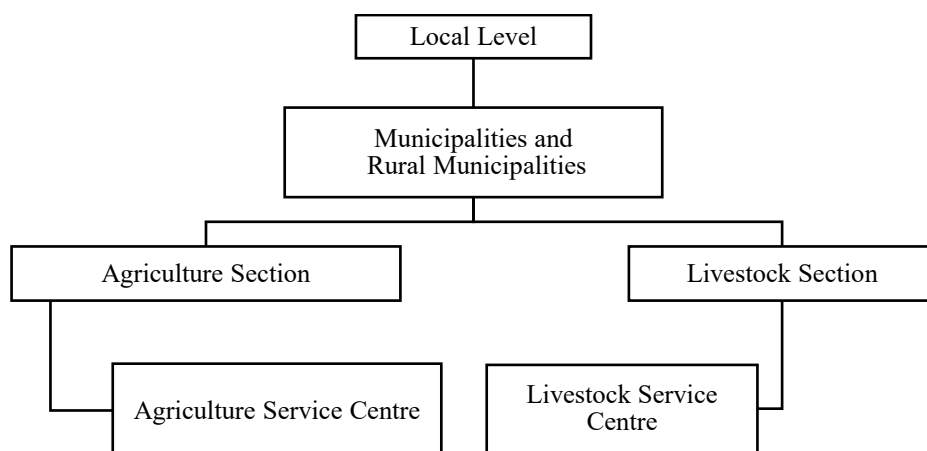
Level	Institution
Federal	<div>Ministry of Agriculture and Livestock Development<ul style="list-style-type: none">• Department of Agriculture• Department of livestock services• Department of food technology and quality control</div>
State	<div>Ministry of Land, Cooperative and Agriculture Ministry<ul style="list-style-type: none">• Directorate of Agriculture Development• Directorate of Livestock and Fishery Development• Agriculture Knowledge Centre• Veterinary Hospital and Livestock Expert Centre</div>
Local	<div>Municipal executives<ul style="list-style-type: none">• Agriculture Section• Livestock Section</div>

Source: Thapa and Devkota (2019)

In this federalized structure, Table 2 shows that institutions are organized across three levels: at the federal level, the Ministry of Agriculture and Livestock Development oversees major departments; at the state level, the Ministry of Land, Cooperative, and Agriculture manages directorates and specialized centers; and at the local level, municipal executives directly administer agriculture and livestock sections to ensure services reach farmers. Figure 1 illustrates this organizational structure under federal governance, visually emphasizing the devolution of power and responsibilities, the pathways for bottom-up planning, farmer engagement, and context-specific service delivery, while underscoring the need for coordination across the three tiers to achieve efficient, equitable, and sustainable agricultural extension.

Figure 1 Three Levels of Government in Nepal's Agriculture Sector





Source: Dahal et al., 2020

4. Discussion: Farmers and Extension Service Delivery in Nepal

The federalization of Nepal's agricultural sector has significantly reshaped the delivery of extension services, creating both opportunities and challenges. The development of agricultural structures at the municipal level has enhanced farmers' involvement in the agricultural planning process, including their right to declare and access agricultural supplies, as well as connections with service providers (Nepali, 2018). With the devolution of authority from central to federal, state, and local levels, municipal executives now directly manage agriculture and livestock services (Jaishi & Paudel, 2020). This structural reform brings extension services closer to farmers, enabling greater local engagement, bottom-up planning, and alignment of programs with community needs. Farmers now have improved access to inputs, technical guidance, and advisory services, enhancing their capacity to adopt new technologies, increase food production, and raise household income. The institutional restructuring also facilitates coordination between public, private, and community-based extension offices, offering a more integrated approach to service delivery (Tamang et al., 2020).

The establishment of effective extension services requires good governance, accountability, and optimal use of local resources and powers (Dahal et al., 2020). However, many developing countries, including Nepal, face challenges such as low local funding, dependence on unstable central government grants, difficulties in hiring and retaining staff, and corruption or financial mismanagement by local authorities (Mangheni & Nkonya, 2011). In Nepal, insufficient understanding of governance, institutionalization, and human resource management remains a major challenge for provincial and local governments (Dahal et al., 2020). Despite the formal devolution of power, traditional centralized mindsets and top-down working practices continue to create difficulties for implementers (Shrestha, 2023).

Farmers' access to public extension services is also uneven, influenced by geography and farm size (Shrestha & Sanjel, 2018). The current restructuring of services is characterized by overlapping authorities, insufficient communication channels, and uneven institutional frameworks (Devkota & Thapa, 2019). Newly established provincial and local institutions often lack the experience and expertise to deliver agricultural services effectively, and extension officers may prefer federal or provincial assignments over local positions, limiting local operational capacity. Figure 1 illustrates Nepal's agricultural organizational structure under federal governance, emphasizing the devolution of power and responsibilities from central authorities to local bodies, the potential for bottom-up planning, farmer engagement, and locally relevant services, while highlighting the need for coordination across the three tiers to ensure effective service delivery (Dahal et al., 2020).

The effectiveness of extension workers, the relevance of their programs, service levels, and farmers' participation all impact farmers' ability to access services. Accessibility, in turn, shapes farmers' perceptions of service value (Oluwasusi & Akanni, 2014). While farmers generally trust the technical expertise of extension officials and find the information clear and useful (Khanal et al., 2023), they express dissatisfaction with the cost, timeliness, and limited availability of services. Farmers often accept extension support when it is need-, demand-, or market-based (Babu & Sah, 2019).

Under federal governance, it is imperative that all levels of government uphold good governance principles. Institutionalizing effective extension delivery can improve farmers' food production, income, and overall standard of living (Dahal et al., 2020). Technology adoption is a key prerequisite, and advisory services play a critical role in providing technical expertise generated by national agricultural research institutions. Despite these advancements, local governments still face challenges such as low-quality services, difficulties in accessing inputs, weak market linkages, and limited bargaining power for farm produce (Dhital, 2017). Large farmers and landowners often receive preferential treatment, leaving smallholders underserved (MoAD, 2016), although farmers generally support the devolution of services to the local level (Bishwakarma et al., 2022).

Policy-level constraints further affect service delivery. While federalization enables local and provincial policy formulation, gaps persist in design and execution. Less than one percent of the national agriculture budget is allocated to extension, and the absence of a federal-level agricultural act complicates coordination among government tiers (Bishwakarma et al., 2022; Shrestha, 2023). Frequent restructuring of the Ministry of Agriculture and Livestock Development, coupled with weak linkage between elected officials and technical staff, undermines consistent policy implementation (Burlakoti & Nettle, 2024). Decentralization has enhanced inclusivity and responsiveness, but local authorities still face significant capacity constraints in planning, managing, and monitoring extension programs effectively (Tamang et al., 2020).

Overall, the discussion aligns with the study's purpose of assessing institutional reforms and challenges in strengthening agricultural extension under Nepal's federal governance system. It evaluates the reforms introduced through federalization, including the devolution of authority and creation of multi-tiered structures that bring extension services closer to farmers. Simultaneously, it highlights challenges such as limited financial and human resources, weak institutional capacity, coordination difficulties, inequitable access for smallholders, and policy-level gaps. By examining both structural changes and their practical implications for farmers, the discussion provides evidence-based insights into how federal governance reforms impact the effectiveness, responsiveness, and inclusivity of agricultural extension services in Nepal, confirming that the study's purpose is met.

5. Conclusion

Agricultural extension in Nepal is central to enhancing productivity, food security, and rural livelihoods, and federalization has created opportunities for local governments to manage services, foster bottom-up planning, and engage farmers in decision-making. Municipal-level management has improved access to inputs, technical guidance, and locally relevant programs, while also facilitating coordination between public, private, and community-based extension services. Despite these gains, challenges persist, including overlapping responsibilities, weak institutional capacity, limited coordination across federal, state, and local levels, preferential treatment of large farmers, and low budget allocation. Addressing these gaps through strengthened institutional capacity, clarified roles across government tiers, and enhanced skills of extension workers is essential to ensure farmer-inclusive, demand-driven planning. Policy implications include prioritizing participatory planning, equitable access to inputs, credit, and technical support, and promoting digital tools and public-private partnerships to expand outreach, particularly in remote areas. Future research should examine the long-term impacts of decentralized extension, technology-driven interventions, and innovative governance approaches to achieve a sustainable, inclusive, and effective agricultural extension system that meets the diverse needs of Nepalese farmers.

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