

Analysis of the Impact of Devolution of the Agriculture Extension System in Nepal

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ABSTRACT: *The political changes and reformation initiated the agriculture extension devolution to a lower level in the 2000s in Nepal. The federal system devolved the agriculture extension to local government to bring changes in the delivery system, institutional role, and farmers' access to knowledge development and financial resources. The research has analysed the impact of the agriculture extension devolution to the local level in the last twenty years through a structured literature review. Specifically, it has been identified that the increase in government institutions at the local level allowed farmers to receive extension services from field-level institutions. However, lack of accountability towards farmers, limited human resources, and low coordination between government institutions have impacted service delivery. Furthermore, the study shows that the devolution of agriculture extension has provided the private sector, development partners, and field-level extension actors to support government institutions by sharing the role of the extension service provider.*

KEYWORDS: agriculture extension, devolution, federalism, decentralization

INTRODUCTION

Agriculture possesses a remarkable contribution to the economy of Nepal. It contributes to a 27.2% share of the Gross Domestic Product (GDP), sharing a dominant position in the economic development of Nepal (MOF, 2020). However, subsistence farming and smallholder farmers dominate the majority of the farming sector. The sector has started to grow from subsistence to commercial farming by adopting smart and innovative technologies. The political reformation and institutional changes contributed to change the agriculture sector commercially. The policymakers have put the need for agriculture extension as a mainstream program to boost the agriculture sector since the 1990s. The adoption of the multiparty system after a huge citizen movement in the 1990s showed

the significant impact in agriculture extension (Nepali, 2018). It massively changed the institutional, implementational and policy areas of the agriculture extension. The decentralization of the power and authority to the lower level started after adopting the multiparty system in Nepal. As a result, for the first time in the history of agriculture, district-level institution District Development Committee (DDCs) got the power and authority to prepare agriculture extension program at the field level. Since 2002, the agriculture extension devolved to the district-level institution to improve the service delivery system to farmers. However, devolution of the agriculture extension to the district level lacks effective implementation of plan and program and field level. The quality of the service delivery to the farmers still criticized for poor execution.

Furthermore, the promulgation of a new constitution in 2015 massively restructured political and institutional structure in the year 2017 (Paudel & Sapkota, 2018). There is different purpose in different countries to adopt federalism. However, Nepal adopts federalism to share the power and authority to the grassroots level and contribute to economic growth for the growth and prosperity of the country. The establishment of the three-level government; Federal government, state, local government, occurred with different concurrent and exclusive power.

The political changes have shown a vital role in offering changes in the agriculture extension of Nepal. The devolution of the agriculture extension to the district level started from the multiparty democracy system. However, till the federalisation, the system has not been firmly institutionalised yet. The establishment of three government with exclusive and concurrent rights has created opportunities and challenges to strengthen the overall governance system. Likewise, a federal government, seven state governments, and seven hundred fifty-three local governments have established their different institutional structure at federal, state and local level. The establishment of various institution under different government has created the issue of quality of delivery system, duplication of activities, and effective implementation of the agriculture extension system at grass-root level (Suvedi et al., 2017a). However, the implication of this change in agriculture extensions, such as agriculture extension delivery system, the role and synergy of plural actors such as government institute, development partners and community-based organization and farmers access to resources after decentralization, has not been studied (Paudyal, 2019). The limited study in this sector brings the need for research to document the impact of devolution on agriculture extension. The research will also help the federal, state, and local government, policymakers, development partners, and extension actors to distinguish the implication of devolution of agriculture extension to the grassroots level. Different authors have studied the about the federalization, good governance, and decentralization of power to the local level (Breen, 2018). However, the study of the relationship between the change and the agriculture extension system remains limited. The overall research aimed to analyse the impact of devolution of Agriculture Extension to the local level of Agriculture Extension. This included the analysis of agriculture extension in terms of service delivery system, the role of government

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institutions, development partners and private organisation, and farmers access to capacity building and financial resources in the last two decades.

The specific objectives of the research are as follows:

- To identify the main impacts from the devolution of agricultural extension in Nepal to local areas in 2015 on the operation of agricultural extension inclusive of: policy, implementation, and institutions
- To identify the opportunity and challenges for the Agriculture Extension system arising from the devolution, including a) the role of plural actors in the Agriculture Extension system.
- To propose strategic actions for the improvement of the agricultural extension system in Nepal

For literature analysis and answer to the research question, there is a requirement for a framework to assess the impact of devolution and federalism in the agriculture extension of Nepal. Here the work of Birner et al., (2009) found to be adequate to analyse the research. Birner et al., (2009) have developed a framework to analyse and compare the agriculture advisory system at the national and sub-national levels. The study has adopted the Birner framework to examine the role governance of institutes, the effectiveness of the agriculture extension system and farmers access to the financial and capacity enhancement resources. The study has explored two primary frame condition of the Birner framework.

- a. Political change, Policy, and Strategy
- b. The capacity of the service provider

The analysis of the effectiveness of the service delivery of the different institution in different period has become a component of research. The study has helped to understand the impact of political and policy reformation in institutional performance and service delivery system of agriculture extension in Nepal. The Birner framework is as follows:

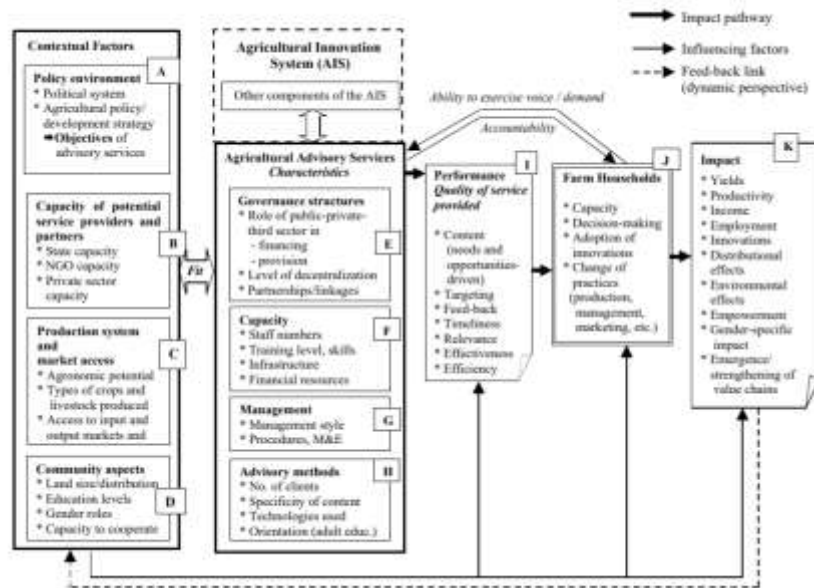


Fig 1: Birner Framework to analyse Agri-advisory system (Birner et al., 2009, p. 26)

LITERATURE REVIEW

In Nepal, political reformation has always impacted the agriculture plan, policies, research, extension, and implementation strategies. The political reformation has contributed to the radical modification of the agriculture extension system of Nepal (Upriety & Shivakoti, 2019). The agriculture Extension system started from the distribution of seed of grass to institution development, technology dissemination, and farmers' capacity enhancement in the agriculture sector. The development of agriculture extension system of Nepal can be divided into different phases based on its development and reformation.

History of Agriculture Extension in Nepal

The initial phase of extension can include the development before 1951. The autocratic Rana rule regime started the agriculture extension system in Nepal by bringing the two Jersey bull and cow and the clover seed from the United Kingdom to Nepal to disseminate new technology. Later, in 1921 ruler established the first-ever agriculture office in Nepal as the first agriculture institution. Later, the office changed to the Department of Agriculture in 1925 to support farmers from the Terai region, producing the food to feed the country. The Rana ruler started the institutional practice and technology dissemination in Nepal (Ghimire et al., 2021).

The development period between 1951 to 1990 led to massive changes and establishment in agriculture extension and research in Nepal. After the end of the

autocratic Rana regime in 1951, support from the different countries began developing Nepal's agriculture system. The changes led to the development of the first five-year plan from 1956 to 1961 to increase production and transfer technology. In 1959, the first time the establishment of agriculture extension section occurred under the Department of Agriculture. After establishing the agriculture extension section, the rural extension worked titled as Junior Technician (JTs) and Junior Technical Assistant (JTAs). The extension agents got certified training from the department to provide extension services in the different agriculture areas. Later, the District Agriculture Development Offices (DADOs) were opened in all districts of Nepal. The DADOs office took responsibility of the agriculture extension all over the countries (FAO, 2015). This period has started to develop institutional and implementational part of the overall agriculture system. In the institutional part, the school of agriculture (1957) handed over to the Tribhuvan University (TU) and established the Institute of Agriculture and Animal Science (IAAS) in 1972. The IAAS is the largest agriculture institute of Nepal to date. The development of the agriculture sector has created a strong foundation for Nepal's agriculture development.

Furthermore, the policy also recognized the National Government Organization (NGOs) impact and development partners to disseminate the extension service at the grass-root level. Another policy also developed in the 2000s to reduce the gap between the service provider and farmers. The Nepal Agriculture Extension Strategy (2007) formulation has initiated recognizing the private sector's role, institutional pluralism, and decentralized extension service delivery at the field level (Devkota et al., 2016). The strategy also provided opened the linkage between multiple actors to improve the extension system. All the policy makers' efforts, government and development partners were still unable to strengthen the agriculture extension system at the field level.

The government put efforts to develop a long-term strategy to reduces the gap of the agriculture sector. Agriculture Development Strategy (ADS) (2015 - 2035) becomes the guiding framework for Nepal's agriculture sector. Apart from different focuses, ADS focused on developing and implementing an extension program and plan that leads to the development of a self-reliant, inclusive, and sustainable agriculture sector (Subedi, 2017).

The series of political changes failed to develop the overall system of the countries. The citizen felt the need of another political reformation, and Nepal adopted the federal system in 2015. Federalism changes the overall political, institutional, implementational strategy of the country with the new constitution. In Nepal, Federalism has the objective to value diverse community, power devolution to the grassroots level to improve the governance system and improve people's well-being and prosperity (Gyawali, 2018).

Federalization and Agriculture Extension

The objective behind the adoption of federalism differs in different countries. Malik (2019) stated that India adopted federalism to devolve the power and authority to state and local government based on the power delegate through the constitution. However, Africa adopts the federal system to increase the unity of the nation and improve the governance system (Osaghae, 2004). The promulgation of the new constitution in 2015 changed the political system to federalization in Nepal. The federalism visioned to address the need of diverse community, devolve the power to lower authority increasing good governance, public well-being and prosperity (Acharya & Zafarullah, 2020).

It changes the overall democratic system, government institutions and service delivery system. The formation of three government, federal, state, and local levels, divided the right and responsibilities accordingly. The agriculture sector also experienced the change in terms of institution and implementation.

Mansanyiwa et al., (2019) discussed that the agriculture extension's devolution to the local government gives the power of implementing the agriculture extension system at the field level in Tanzania. However, the ineffective staff allocation from the central government creates limited extension workers at a government institution. The staff allocation's power comes under the central government right; it results in ineffective service delivery to farmers. The local government has the rights to implement the extension services, but that does not help strengthen the agriculture extension system. Memon et al., (2015) argued that the devolution of agriculture extension to the local level in Pakistan has reduced the gap between policymakers and farmers. The farmers are likely to reach to local government easily in comparison to the central government. However, the effective coordination, synergy and collaboration between all the government institutions can only help achieve devolution objectives. The author also addressed monitoring the service delivery system's effectiveness to farmers undermined, which showed that many farmers could not feel the fundamental changes after the devolution of extension to the local unit.

The devolution of agriculture extension after federalism is still in the implementation phase with ample opportunity and threats. Dahal et al., (2020), federalism has provided the government institution platform to reduce the gap between farmers and service providers. However, it depends upon the accountability and governance system. The authors discussed that the need to explore improving the governance system and undertaking government institutions could support the effective delivery system. The study showed the need for research in agriculture extension in the context of federalism. However, the study limited in state 2; it has not included the research from different parts of the countries. The research from the analysis of the overall extension system after federalization can help interpret the impact of the devolution of agriculture extension to the local government.

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Jaishi et al (2015) revealed that the need for coordination between three government for the effectiveness of using the government's different rights. The efforts on the synergy between three government can only help in the coordination of other government institution.

METHODOLOGY

The research has adopted the structured literature review to collect and analyse the data and information. The structured literature review allows the researcher to deeply explore and analyse the topic with many works from other scholars (Massaro et al., 2016). The study has included the following types of documents for analysis:

- i. Grey Literature
- ii. Published scientific article, reports, books, and Journal.
- iii. Government reports, Plan and Policies

The following database has explored for searching the database for the research.

- i. Google Scholar
- ii. Scopus
- iii. Web of Science
- iv. CABI

The collection, identification and selection of the document has followed the Prisma flow diagram for systemic review.

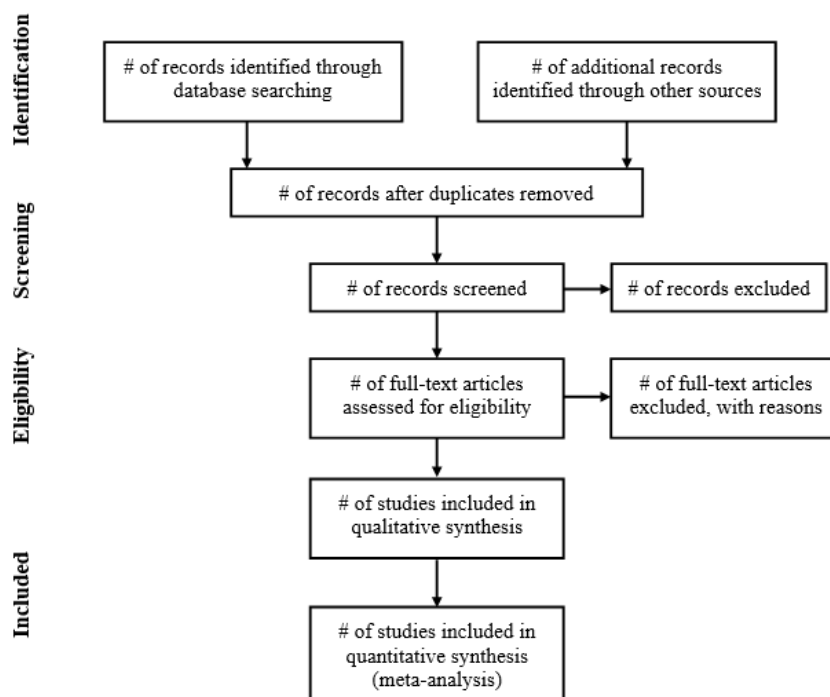


Fig 2: Prisma Flow Diagram (Liberati et al., 2009, p. 4)

The search criteria included the timeline of the article published in the last 20 year with the research keywords. After searching the document in the database, the abstract and results explored to understand the articles' depth. The keywords helped to get the article from the research areas.

The study has adopted the search process by using the keywords from the database searching and government website. Google Scholar and Scopus found to be significant database sources; however, web of science and CABI also provided the number of the articles. Initially, around 150 databases explored from the abovementioned database engine. Furthermore, almost twenty national policy, plan and government report extracted from the official website of the government of Nepal. At the screening stage, forty documents from the database engine needed to discard because of similarity in research areas. However, all the government reports, national plan and policy remained for the analysis.

At the next stage, almost forty more article founded to be less beneficial for research. After going through the abstract and results, these articles showed the deviation from the literature's primary objective. Furthermore, twenty articles found to be similar in areas of analysis and research. The study included sixty documents from the database and ten from the national website for the final analysis.

RESULTS AND DISSCUSSION

The structured literature review of the different article enables to explore the depth of the devolution of agriculture extension in Nepal (Dumay et al., 2016). The devolution of agriculture extension has shown the different level of impact in institution, policy, and implementation. Moreover, following the adoption of the federal system, agricultural extension services have been decentralized, placing more authority in the hands of the local level. Nonetheless, there is still a need for effective implementation of the agricultural extension system at the grassroots level (Suvedi & Ghimire, 2015). The political revolution has far-reaching effects on various sectors across countries. Alterations in government, policies, and institutions directly influence how service providers operate, leading to new strategies, revised priorities, and shifts in resource allocation. The agricultural extension system in Nepal has experienced the impact of these political changes over time (Suvedi et al., 2017b). There were substantial reforms in terms of institutions, implementation strategies, policies, and resource allocation. The considerable effects of the devolution of agricultural extension since the 2000s and the influence of federalism on agricultural extension are examined and deliberated as follows.

Devolution of Agriculture Extension

The LOGA 1999 devolved the agriculture extension to the district level after adopting decentralisation in the Nepalese political system (LOGA, 1999). To improve the

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government service delivery system to farmers and improve the agriculture system, the government devolved the power and authority of the agriculture extension to the district level institution DDCs.

Formulation of relevant Plan and Policies

The decentralization focused on preparing different plan and policies to improve the service delivery system from central to the field level (Rijal, 2013). Prior to decentralization, the system lacked suitable strategies and policies to enhance the agricultural extension system. Subsequently, a series of plans and policies were introduced with a specific focus on enhancing the service delivery system and agricultural extension.

Table 3. List of major plan and policies of Agriculture Extension (GON, 2021)

S.N.	Plan and Policies
1.	Nepal Agriculture Policy (NAP) (2004)
2.	Nepal Agriculture Extension Strategy (NAES) (2007)
3.	Agriculture Development Strategy (ADS) (2015-2035)

The ADS focused on the capacity building of the extension actors rather than increasing the significant number of extension worker at the field level (FAO, 2015). It also started the concept of a community agricultural extension service centre (CAESC) to improve the service delivery system at farmer's level (Bishwakarma et al., 2020b). The strategy addressed the need for coordination between research and extension institutions to improve farmers' service delivery system. Furthermore, it recognized the necessity of academia and universities in strengthening decentralize agriculture extension system in Nepal. The strategy also included the initiation of the voucher system to improve the accessibility to farm inputs and extension system; however, the practice has not started yet. Khanal et al., (2020) discussed that the implementation of ADS vision became slow because the strategy was designed before adopting the federal system in Nepal. The strategy should be adapted to align with federalism principles to ensure the smooth achievement of the ADS's vision and objectives.

Platform for Plural Actor and Private Sector

A pluralistic extension system promotes increasing the service provider's availability at the grassroot level (Gauchan, 2008). The presence of an extension service provider like a para vet in the field conveys to farmers that extension workers are accessible within their own farming environment. The para vet in the village establishes both an emotional and professional rapport with farmers, serving as a trusted resource for farmers to access extension services (Thapa, 2020). Likewise, Agro vet has assisted farmers in solving issues related to the availability of technology, inputs, as well as problems with animals and plants diseases and pest. The promotion of a pluralistic extension approach has led to greater involvement of private sector entities and local extension practitioners in delivering extension services, thereby distributing the responsibilities beyond the public sector.

Opportunities of Agriculture Extension devolution

The implementation of agricultural extension devolution at the grassroots level poses a formidable challenge for government (Saeed et al., 2006). Nonetheless, it has opened opportunities for farmers, stakeholders, development partners, the private sector, and government institutions to enhance service delivery, allocate and utilize resources more effectively in Nepal.

Before the decentralization of agricultural extension to local authorities, the staff and institutions at the field level had to depend on programs designed by the central government and institutions (Rivera & Alex 2005). The decentralization of agricultural extension to lower authorities enhances the availability of extension organizations like NGOs, INGOs, CBOs, cooperatives, and private sectors to convey the demands and issues to the government. Development partners can also communicate their plans to reduce redundant activities at the grassroots level. This has boosted the collaboration and coordination among farmers, development partners, and government institutions (Ojha & Morin, 2001).

The South African case study further illustrates that collaboration among various institutions is the foundation of the agricultural extension service delivery system. This cooperation improves the efficiency of service delivery and lessens the workload for government institutions (Ngaka & Zwane, 2018). Following the decentralization of extension services to lower levels, there has been a notable rise in the presence of various NGOs and INGOs dedicated to expanding extension services at the grassroots level. The case study revealed that NGOs have assisted farmers in advocating for their interests and establishing farmer groups to access agricultural services (Westendorp & BahadurGhartiMagar, 2011).

The involvement of farmers in the planning phase can contribute to the creation of an annual plan and budget allocation that prioritizes their needs. In Nepal, with the decentralization of agricultural extension to district-level institutions, an opportunity has emerged for farmers to have a say in the budget allocation process and engage with government institutions. The transfer of authority to district-level institutions has enhanced the engagement of grassroots individuals in the annual planning process. Additionally, it has granted district authorities the ability to oversee program planning, budgeting, and execution (Swanson, 2008). The study on the impact of devolution of agriculture extension to the local authority of Ghana also provided the insight of opportunity created through agriculture extension devolution. Danielle (2018) reported that the devolution of agriculture extension to the local level had increased farmer participation in the planning process of the agriculture sector in Ghana. The farmers' access to the planning process helps prepare the inclusive and need-based annual plan for agriculture institutions.

Federalism and its impact in Agriculture Extension Devolution**Decentralization of institution**

Federalism has offered considerable changes in the government institution, local bodies and role and responsibilities of all the institutions. The federal government, seven state governments, and seven hundred fifty-three local governments have different exclusive and concurrent powers from the constitution (Gyawali, 2018). The gap between government bodies and citizens was prevalent before federalism when the administrative power was under the government staff. The citizen chooses the local government representative to remain at administrative role in the given tenure through their votes. The local government supposed to understand the demand and need of the grassroots level. The promulgation of the new constitution has provided the following major shift in the government and implementation role;

Table 1: Changes in Extension after federalism (Kyle & Resnick, 2019)

Characteristics	Prior to Federalism	Changes after federalism	Impacts
Government	Development Region (5), Districts (75), VDCs (3915) and municipalities (58)	Federal Government, State Government (7), Districts (77), Local Government (753)	The local government struggled to manage financial and human resources
Implementation of Local bodies	Administered by the government officials of Ministry of Foreign affairs and Local Development (MOFALD)	Elected bodies from election	Struggle to coordinate the national agriculture priority and local farmers demands.
Agriculture program and policy implementation	Overall policy and plan prepared at central level and Agriculture Extension to district level DDCs, DADOs and DLSOs	Provision of different exclusive and concurrent right to federal, state, and local government. Specifically, agriculture extension operation and management devolved to Local government.	The capacity to prepare the plan, policy and program at local government is comparatively weak.

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The concentration of the government institution at district-level institutions has widened the gap between farmers and service providers before the federal system. The following changes have occurred in the government institution providing agriculture extension after the federal system.

Table 2: Government Institution after Federalisation (Thapa & Devkota, 2019)

Level	Institution
Federal	Ministry of Agriculture and Livestock Development
	Prime minister Agriculture Mechanization Project
State	Ministry of Land, Cooperative and Agriculture Ministry
	Agriculture Knowledge Centre
	Livestock Expert Centre
Local	Agriculture Section
	Livestock Section

The provision of the agriculture and livestock centre with an expert at level increases the farmers access to government at the field level. The biasedness of the government institution towards the big and urban-centric farmers remained high. The positive impact of establishing agriculture institutions at the local level has increased the farmers' participation in the planning process, right claim, and access to agriculture inputs and interaction with service providers. For example, the Belaka municipality, a local government of Nepal, is in rural areas. Before establishing the local government, there was no facility of the government institution in that areas (Bishwakarma et al., 2020a). Neither farmer have access to bring out the voice on demands and needs. But after the introduction of the local government, the government has prepared own plan to accommodate farmers need and demand in the annual planning process. The government has formed a local agriculture support unit with the participation of farmers and development partners.

The increment of farmers accessibility to the financial and input resources after the devolution of the agriculture extension to local government is the positive impact of federalism (Nepali, 2018). It has incorporated the voice and need of the farmers in the planning process and budgeting. However, the political biases and differences between big farmers and smallholder farmers have raised the question of good governance. The local government needs to increase the smallholder farmers' access to a government program's planning process and support. The example of Uganda on the decentralization of agriculture extension also showed the increase in the public access to the service from government institution. Still, budget allocation, accountability, and relationship with the central government have affected the quality of service delivery (Norton & Alwang, 2020).

All sectors, including agriculture, need to follow the seven-step planning process to prepare an annual plan and budget for implementation starting from December to July (Manandhar et al., 2020). The focused group discussion and meeting at ward level,

including farmers, farmer leaders, and the group, includes farmers' demand, promoting inclusivity and accountability at the local level. The farmers' participation in annual planning helps to retain the real need of farmers in government programs and explore the field-level issues that improve the service delivery system.

Access to Resources

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Coordination, Collaboration and Synergy between elected bodies and government officials

The reluctance of the government staff to work under the elected local representative has created the accountability issue after adopting the federal system among agriculture extension and other sectors. The situation has led to a void between local government and sectional government staffs (Chaudhary, 2019). The gap needs to reduce with different orientation, coordination and synergy between staffs and government representation. The impactful division and implementation of the power among the institution remained the issue of Federalism in Nepal (Breen, 2018).

The field study in three different local governments shows that the local governments are experiencing poor sectoral linkage between federal, state, and local government institutions (Bishwakarma et al., 2020b). The coordination and linkage between the agriculture sector of three levels of government is the prevalent issue raised after the adoption of federalism that needs to resolve. The gap between the government official and elected bodies withheld the effective performance of the local government. It may affect the overall implementation of the federalism at field level.

Challenges of Agriculture Extension devolution

The devolution of agriculture extension to the farmers level has not been able to bring the expected change in the Nepalese agriculture sector (Tapa & Ojha, 2011). Various challenges impacted the agriculture extension sector even after the devolution of the power to the lower authority. The challenges that prevent performing the agriculture extension institutions, actors, and policymakers effectively and efficiently are as follows:

Human Resources Management of Government Institutions

The agriculture extension sector has always suffered from the limited human resources for effective service delivery in Nepal. Agriculture extension devolved to the district level after the 2000s and local level after federalism; however, the devolution happened at the paper, reality perform differently. It is impossible to provide quality extension service without the minimum human resources at the field level (Abbas et al., 2009). The devolution failed to perform in terms of staff allocation and budget availability at the field level. It created the considerable gap in the implementation of effective service delivery to the farmers.

Cidro and Radhakrishna (2020) also discussed that the devolution of the agriculture extension increases technology dissemination and information access to the farmers. The study from different countries also shows the government lacks investment in agriculture extension to improve the quality of the extension system. India has also devolved the agriculture extension to lower authority; however, lower quality service still exists (Birner & Anderson, 2007). The author also discussed the insufficient fund allocation to improve the service delivery system as a significant challenge of agriculture extension India. The investment should be done to increase the capacity of human resources of different government institution for better performance of the extension workers (Takahashi et al., 2020).

Accountability of Service Provider

The lack of accountability of the extension actors towards field level farmers is one of the significant challenges of devolution of agriculture extension. The analysis of indicator from a piece of paper shows the implementation of extension activities at the field level (Feder & Anderson, 2004). However, the accountability of the staff towards farmers issue is relatively low. The study observed that the lack of focus of extension actors towards field level difficulties had widened the gap between duty bearers and farmers. Kyle and Resnick (2019) argued that the concentration of the government institution to fulfil the national goals, rather than focusing on the need of the farmers, did not contribute to satisfying the objective of devolution of agriculture extension. The study showed that 80% of the district-level institutions focused on national goals than field-level farmers issues. The author further added that the district level institution for agriculture DADOs and DLSOs always suffered a lack of staff to deliver the effective service. The government institution need to increase the accountability towards the farmers for effective implementation of agriculture extension services (Kharel, 2019).

The government institution should priorities the quality service for farmers as a significant responsibility.

Weak Coordination and Collaboration between Institutions

The devolution of agriculture extension to the local government has provided the exclusive right to the government in terms of policy formulation, annual plan preparation and implementation strategy. However, the local government needs to coordinate with other government institutions of state and federal government and extension actors to implement the annual plan and programmes. Subedi (2017) discussed the need of coordination and collaboration between extension actors and government institutions to improve the extension system at the local level. The author also focused on the interaction between development partners, extension actors, and local government to strengthen the agriculture extension. The weak coordination between the government institution has created the confusing situation for farmers to receive the service. There are different local government institutions and state government institutions in one district, but lack of interaction between them while planning and implementation create duplication and difficulties in service delivery (Devkota et al., 2016).

Proposed Strategic Actions and Suggestions

- The government needs to allocate budget and activities to increase the capacity of the extension workers and government officials for effective impact of the change (Ghimire, 2017). It helps to improve the vibrant role of the extension actors to provide adequate service to farmers and improve the agriculture extension system.
- There is need of synergy and coordination between federal, state, and local government institution (Sharma, 2020). The effective coordination between three level of government facilities to reduce the duplication of program, inclusive implementation, and effectiveness of service delivery system.
- The role of private extension actors needs to increase to reduce the burden of the extension service from public sector (Feder et al., 2011). The increasing role of private sector can reduce the burdensome of the government institution in extension services. Likewise, farmers can have number of service provider to reduces the agriculture related problems at field.
- The federal and state government should support Local government through providing the adequate number of staffs (Adhikari, 2020). It helps to implement the program and plan effectively at field level. Otherwise, delegating the power without optimum human power will be meaningless. The local government cannot perform adequately only with the elected representatives. There is a massive need of adequate number of staff at local level for effective implementation the federalism in Nepal.

CONCLUSION

Nepalese agriculture extension system has transformed in last twenty years in terms of plan, policies, and implementation level. The devolution of the agriculture extension has set the milestone to improve service since the 2000s. The political transformation has contributed to devolving agriculture extension to the farmers level to reduce the gap between farmers and service providers, improving the plan policies and access to resources for farmers. However, there is a huge gap between policies formulation and effective implementation of policies.

This study set out to analyse the impact of devolution of agriculture extension in Nepal. The study found that the series of political reformation has impacted the agriculture extension system to transform from a top-down approach to the bottom-up approach. It has shown that the government has changed the agriculture extension system from a multiparty system to federalism, devolving the power and authority to district and local government. However, the transformation has failed to implement the objective of devolution at the field level. There is a huge gap between policies formulation and adoption of the policies at the farmers level to provide effective extension service to the smallholder's farmers. Furthermore, the considerable gap between the elected bodies and government officials in the federal system has further increased the problem of accountability towards the farmers.

The impact analysis based on the Birner framework seems deficient in analysing farmers access to financial resources and relationship with government in Nepal. The limitation of the study is the results and conclusion drawn in the previous research and articles have dominated the discussion of the paper. There is a need for further research on how effective implementation of agriculture extension can be done in the federal system of Nepal and compare with devolution of other countries.

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