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AGRICULTURAL EXTENSION IN NEPAL UNDER FEDERALISM

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Agricultural Extension in Nepal under Federalism

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Abbreviations

ADS Agriculture Development Strategy
AESA Agriculture Extension in South Asia

APP Agriculture Perspective Plan
ASC Agriculture Service Center

ASSC Agriculture Sub-Service Centers

CAESC Community Agriculture Extension Service Center

CASC Community Agriculture Service Center

CNA Capacity Needs Assessment

CPA Comprehensive Peace Agreement

CTEVT Council for Technical Education and Vocational Training

DADO District Agriculture Development Office

DDC District Development Committee

DLO District Livestock Officer

DLSO District Livestock Service Office
DOA Department of Agriculture

DOE Directorate of Agriculture Extension
EAS Extension and Advisory Service
FAO Food and Agriculture Organization

GESI Gender and Social Inclusion

GoN Government of Nepal

HBCU Historically Black Colleges and University
ICT Information and Communication Technology
IFPRI International Food Policy Research Institute
ILRI International Livestock Research Institute

JTA Junior Technical Assistant

LGOA Local Governance Operation Act

LGU Land Grant Universities
LSGA Local Self-Governance Act

MANAGE National Institute of Agricultural Extension Management, Hyderabad, India

MoAD Ministry of Agricultural Development

MoFALD Ministry of Federal Affairs and Local Development

MoLD Ministry of Livestock Development

NAES Nepal Agriculture Extension Association

OECD Organization of Economic Cooperation and Development

SAC SAARC Agriculture Centre
TU Tribhuvan University

US United States

VDC Village Development Committee

Executive summary

It is a significant challenge for any new federal, state government or assembly to sketch a road map for overall state and societal restructuring, re-orient the existing government apparatus to address communities in an agrarian landscape, and streamline the overall process of sociopolitical and economic transformation. Institutional transition offers unique opportunities to address existing weaknesses in the current policy process and in the institutional structure, including the agriculture sector. The problem of agriculture extension service delivery, however, is not just an issue of decentralization; whether the extension system is centralized or not, it is still largely based on the public sector system. Analysis of the discourses of local governance, especially with regard to constitutional provisions, is a prominent issue in the restructuring process. The structure of local governance and the relative autonomy at local level is one of the major plans in the context of popular discourses pertaining to state restructuring. In this context this paper highlights the discourses of local governance in Nepal by reviewing three types of documents: Local Governance Operation Act (LGOA 2017); Agriculture Development Strategy (ADS 2015-2035); and learning's gleaned from Nepal's decentralized agriculture extension service in the last two decades.

This paper examines the major shortcomings of past efforts in Nepal and highlights the government's strategy, developed through policy measures, to overcome these limitations. The

specific questions addressed in this paper include: What is the overall context of state structuring in relation to amending the erstwhile administrative structure of Nepal? How does this structure and the related provision of public agriculture goods and services help the people? Finally, what will be the likely structure set up in the agriculture sector, and how will it align with the national goal and strategy?

The concerns regarding the restructuring of local governance according to subsidiary principles and perspectives should also be taken into account. After big political changes, it is the right time to take a new political course along with suitable decisions for state restructuring based on political mandates and constitutional provisions. The complexities inherent in the socio-cultural and physical landscape of the country indicate that the architecture of local governance may determine the ways on how to go forward and to what extent the participation of people in governance are ensured in LGOA 2017. Building appropriate local governance structures require bridging the demand and supply side so that it can be downwardly accountable to citizens. Furthermore, the practical aspects for the creation of these units should stem from the grassroots level. As for sustainability, institutionalized interventions, assemblies and legislative bodies of rural municipalities can initiate and regulate the local policy-making process via various communitybased policies, laws and bi-laws.

1. Introduction

Restoration of multi-party democracy in the country in 1990 gave Nepal a new multi-party democratic constitution in 1991, which appropriately recognized decentralization as a means to ensure optimum involvement of the people in governance (SAC 2014). Nepal adopted federalism under the new constitution promulgated in 2015. Federalism refers to a division of powers among multiple entities—typically between a central (federal) and a regional (provincial/state) government (Kyle and Resnick 2016).

This historic transition from a unitary to a federal democratic republic is expected to address the country's problems on governing its uneven demography, society, and geography. The new Constitution envisages local provincial governments as meaningful contributors to, and drivers of, the local planning process. With successful local elections after two decades in the country's seven provinces, hopes are high that local governments will deliver on their mandates. Kyle and Resnick (2016) noted that "this institutional transition offers a unique opportunity to address existing weaknesses in the current policy process and institutional structure, including the agricultural sector."

After the promulgation of the democratic, republican and inclusive constitution in 2015, Nepal has entered into an era of federalization. The recent election of the national legislative body (House of Representatives) and provincial assembly has further institutionalized the federalization process. Federalization entails the overall restructuring of state and societal apparatus with shared rule and self-rule, including principles for dividing final authority between member units and the common institutions. The newly promulgated constitution has many inclusive provisions and devolution of power and authority to federal state and local government. Consequently, people have high aspirations for federalization and they hope that societal restructuring will bring about overall socioeconomic and cultural transformation.

It is a significant challenge for new federal and state government and assembly to sketch the road

map for overall state and societal restructuring, re-orient the existing government apparatus to address the concerns of poor and marginalized communities in an agrarian landscape, and streamline the overall process of socio-political and economic transformation.

Nepal is a late starter in providing public services to all the people, as it formally began in the 1950s after the fall of the autocratic Rana regime (Paudel 2011). The Nepalese government has created different public service delivery mechanisms to make effective service provision to the public, however, the targets were found to be difficult to achieve. Although significant efforts have been made by the agriculture service delivery system there still exist several problems and issues, such as structural, institutional, planning, delivery mechanism, capacity of extension personnel, funding, demand and supply mechanism of resources, that require due attention for more efficient and effective service delivery (Jaishi et al. 2013).

State restructuring, in general, refers to the reorganization or reorientation of the existing state structure of any country to achieve certain specific objectives. The purpose of state restructuring in Nepal is multi-faceted. In most instances, restructuring is pursued in order to create a more logical organization in which the state can perform its mandate and fulfill its responsibilities more efficiently and effectively (Young n. d). The peoples' successful movement in Nepal has recently dismantled the two-and-a-halfcentury-old Shah regime, and Nepal has transformed from a kingdom to a federal republic (Pyakuryal and Upreti 2016). Consequently, the debate on restructuring of the state and societal transformation (state and societal restructuring) has become a common agenda at academic and political levels. Given this turn of events, the hope is that agrarian transformation will occur, subsistence agriculture will turn into a modern, commercial and industrialized agriculture, and agricultural development will go on to accelerate the industrial development of the country. Farmers will be influential in policy formulation and decision making, leading to agrarian transformation through alterations in the existing

federal-agrarian nexus (Pyakuryal and Upreti 2016). At the same time, governance is a prerequisite for managing the service delivery functions that can only be ensured through high accountability and transparency on the part of the government and the local bodies along with effective participation of the people.

Extension has helped the communities sustain their livelihoods by dealing with the vagaries of climate and socio-economic factors (Shivakumar and Sulaiman 2016). Extension is taking a new dimension because of global movement for reforming the national extension system in developing countries that started in late twentieth century. Agriculture extension services are under increasing pressure to become more responsive to become more effective and less costly to the government (Suvedi and Kaplowitz 2016). New demands and needs are emerging as the world enters into era of globalization, democracy, privatization and decentralization, affecting the farmers of both developed and developing countries- albeit in different ways (Pandey et al. 2016). Extension in developing countries indeed has a very new role to play and need the serious attentions of policy makers for its meaningful reform and modernization. In order to create more responsive and accountable management, fiscal and structural, and planning process needed to be restructured (Jaishi and Shahi 2016). Agriculture faces formidable challenges of shrinking land and water, adverse impact of climate change, skewed development crisis in farm labor stagnant productivity, increasing production cost, dwindling resources, market uncertainties and weak technology delivery system (Sadamate 2018).

In Nepal, research, extension and market development are generally the responsibilities of the government, and there are several issues that affect the performance of agencies providing these services (Shrestha 2011, Joshi 2016). In the case of public extension, the major issues include:

- lack of motivation and incentives among rural youth and farmers;
- inadequate number of extension workers as well as their qualification, competency, and skills;
- inadequate infrastructure and capacity with

- regard to use of Information and Communication Technologies (ICTs) among ground level extension workers;
- lack of monitoring and assessment of impact of extension activities among rural farmers;
- low level of need-based extension coverage, particularly for small farmers;
- ineffective and weak linkages between stakeholders at different levels;
- insufficient budget and investment for extension activities;
- domination of supply-driven approaches rather than demand-driven ones (FAO 2010, Jaishi et al. 2013, Dhital 2017).

"In top down extension system, the central government provided the agriculture extension services through the district agricultural extension offices and their service centers and sub-service centers, various commodity-specific farms, regional training centers and other such structures. In addition to supplying extension services, these structures also provided information on quantities of agri-inputs demanded, levels of local production, commodity prices, and other data. The farmers usually expressed their demands to these offices through farmer groups and cooperatives. As these organizational structures are now being dismantled and as local governments prepare themselves for provision of a part of such services, there are more questions than solutions to be provided" (Rai and Sharma 2018).

Despite the significant efforts made by the extension system, there are still several problems and issues that require attention so that it functions more efficiently and effectively. One of the major challenges for the agricultural extension system is how to serve the bulk of the rural poor and socially disadvantaged groups who had long been neglected by extension and other services. Other problems are: inadequate linkage among research and extension, education of farmers and other stakeholders, poor infra-structural development, insufficient number of extension personnel, etc. (DOE 2005).

This paper reviews the performance of agricultural extension service delivery in Nepal, especially in the current context of ongoing state and societal restructuring. In the rapidly changing political

context, this paper contributes to the discourses on local governance and policy implications bearing in mind the following research questions:

- i. What is the overall context of state structuring in relation to amending the erstwhile administrative structure of Nepal?
- ii. How does this structure and the related provision of public agriculture goods and services help people at the grassroot level?
- iii. What will be the likely structure set up in the agriculture sector, and how will it align with the national goal and strategy?

Finally, the paper presents the institutional architecture of local governance in relation to agriculture service delivery and societal restructuring.

The rest of the paper is organized as follows: Section 2 presents the methodology used for the study. The concept of federalism practiced in Nepal is discussed in Section 3. Section 4 has elaborated on the impact of federalism in the agricultural sector. The implications for agricultural extension under federalism are discussed in Section 5. The paper ends with some concluding remarks in Section 6.

2. Methodology

This paper is primarily based on a review of documents on the issues of state restructuring and performance of local government in Nepal, specially focusing on decentralized agricultural extension and the federalized context.

For this study, we examined several documents, including textbooks, journals, a status paper, a working paper, a policy paper, etc., so as to elaborate on the implications of the new constitutional provisions for land and agriculture –The Constitution of Nepal 2015 (Article

25,36,40,51...), via legislation, guarantees the people's rights over land, natural resources, and the right to food and agriculture in alignment with public interest and socialist orientation. Desk study involves the examination, analysis and interpretation of policies and documents, and constitutes the basic method of generating data (Onyekachi 2016).

Though this paper does not include any primary data or direct observation of EAS activities, the authors' experiences have been factored in.

3. Federalism in Nepal

After a long period of consultation, in September 2015 Nepal's elected parliamentary body, the Constituent Assembly, passed a new constitution, known as the 2072 Constitution of Nepal. Among other notable provisions, a key objective of the Constitution is to transform Nepal into a "federal democratic republican country". This reform represents a new chapter in Nepal's history, which has been relatively fragile and volatile since the 1990s. The popular uprising of April 2006 (Jana andolan II) was an expression of a widely-felt need for change. The decade-long armed conflict formally ended in November 2006 with the Comprehensive Peace Agreement (CPA) between the Government of Nepal, then constituted by a coalition of seven political parties, and the Communist Party of Nepal (Maoist).

Federalization entails the overall restructuring of state and societal apparatus with shared rule and self-rule, including principles for dividing final authority between member units and the common institutions. The newly promulgated constitution has many inclusive provisions and devolution of power and authority to federal state and local government. Consequently, people have

high aspirations for federalization and they hope that societal restructuring will bring about overall socio-economic and cultural transformation.

The recent constitution has inclusive provisions and substantive issues for the betterment of the people. For example, the Constitution of Nepal 2015 (Article 25, 36, 40, 51...) guarantees the people's rights over land, natural resources, and the right to food and agriculture in alignment with public interest and socialist orientation via legislation. Similarly, Article 57 (Distribution of state power) Schedule 6, 8 has mentioned the concept of State Universities, higher education, and libraries for educating and empowering the people for their engagement in overall social transformation.

Federalism is a political system in which the activities of government are divided between a regional and a central government in such a way that each part of government has some activities on which it makes final decisions. This decision has implications for the structure of responsibilities and finances across different levels of government (Table 1).

Table 1: Key definition and concept of federalism and characteristics

Characteristics	Implication
Authority	Clear delineation of responsibilities across tiers within a legal framework
Autonomy	Adequate control over fiscal and human resources to fulfill responsibilities
Accountability	Flows of information and mechanisms for rewards/sanctions, both vertically (between citizens and governments and between tiers of government) and horizontally (across ministries and actors engaged in complementary activities)
Coordination	Institutional mechanisms and other options for ensuring horizontal and vertical coordination
Incentives	Human resource and expenditure policies that encourage good performance and efficient service delivery

Source: Adapted from Kyle and Resnick 2016

Under the new Constitution, Nepal has a three layer structure of federalism, i.e. federal, state and local levels. The erstwhile unitary structure of the country has been replaced by seven federal provinces with delineation of stipulated legislative powers for the central, provincial, and local bodies. The creation of 753 local levels in Nepal

marks a major restructuring of local bodies. This has been done in line with the federal structure. As per the new arrangement, Nepal has 460 rural municipalities, 276 municipalities, 11 sub metropolitan cities, and 6 metropolitan cities. These local bodies are divided into 6740 wards as the lowest administrative unit of government

(www.gov.np). The government's priority is now on effective management of these local bodies.

With regard to local governance, several Acts and Regulations have been formulated and implemented in Nepal over the past six decades. The focus of these attempts was to provide a legal basis for the decentralization of power from a central authority to district, municipality and village levels. In principle, these provisions were however not designed to fully adhere to a central

idea of local governance but are also meant to encourage and establish people's access, ownership, and participation in the governing system. The Local Self-Governance Act (LSGA) of 1999 was the last legal instrument crafted for designing local governance in the last 18 years (1999-2017). It aimed to enhance autonomy and convey greater roles to the local government bodies. Unfortunately, three years after the LSGA was passed, the entire elected leadership of local bodies was dissolved as their tenure expired (see Box 1).

Box 1: Nepal's experience with LSGA (1999)

The LSGA is regarded as a landmark for the devolution of power and authority to the local governing bodies and marked an important departure from earlier legal provisions. As a consequence, the Government of Nepal instructed Village Development Committees (VDCs) and District Development Committee (DDCs) to allocate at least 15% of the total block grant for agricultural development. The LGSA had stipulated that all local bodies have their own elected political leadership. However, by 2000, civil conflict had affected about half of the 75 (predominantly rural) districts. Insurgents often targeted VDC offices, forcing elected officials to flee their villages (Brand 2014). Consequently, in 2002, the government decided that it was not possible to hold new local elections and instead allowed the terms of those officials who were elected in 1998 to expire. Therefore, for the last 15 years, local governments are being authorized by civil servants appointed by GoN (Kyle and Resnick 2016). LSGA also had some inadequacies and ambiguities with regard to sharing power and authority between different governing units.

4. Federalism and its Impact on Agriculture

Table 2 describes the primary responsibilities in governing the agricultural sector and the government tier given primary authority for a particular responsibility. As can be seen from the table, many of the responsibilities are officially allocated across multiple tiers of government, leaving it unclear where certain powers should lie, as per the Constitution. In particular there is

ambiguity over agricultural research, food safety, environmental protection and conservation, and agricultural education. Typically, when there are concurrent functions, the rule of subsidiary prevails, which means that the lowest government tier that is capable of performing the function should be given the mandate to do so.

Table 2: Schedule of powers across tiers of government within the agricultural sector

Characteristics	Implication
Regulatory Services: Food Safety	Federal, provinces
Plant quarantine and livestock quarantine	Federal
Seed safety	Unspecified
Research and development	Federal & province
Agricultural education	Unspecified
Agriculture and livestock extension service	Local
Environment, protection & conservation: Soil health, Forest, Water use	Federal, province, local
Land use, Land tenure, Land reform	Federal, province, local
Irrigation	Federal, province, local
Rural infrastructure	Federal, Province, local

Source: Kyle and Resnick 2016; The Constitution of Nepal - 2015

Under the Local Governance Operation Act (LGOA 2017) promulgated in September 2017, agriculture development and extension-related duties and responsibilities have been explicitly mentioned in Part 3, under roles, duties, and authority of local body under Clause 11. Further on, planning and implementation has been mentioned in Part 6 Clause 24. Representatives of local bodies from the recent local election held in 2017 will implement these provisions. According to Schedule8 of the Constitution of Nepal 2015, local bodies will have powers to manage local service, local market management, environment protection and bio-diversity, local roads, rural roads, agro-roads, irrigation, management of agriculture and animal husbandry, agro-products management, animal health, and cooperatives. Local units can identify the need for these, collect revenue, plan projects, lay out budgets, and implement these within the local levels.

Furthermore, the Government of Nepal is committed to agricultural development goals, which it will now pursue within a federal structure. The country's current agricultural framework is guided by the Agricultural Development Strategy (ADS), which is intended to provide direction within the sector for the next two decades. The ADS is a 20-years-vision that ultimately aims to achieve "a self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security leading to food sovereignty" (MoAD 2014). There are also a number of crossministerial policies and strategies intended to achieve food security more broadly, including the Multi-Sector Nutritional Plan, the Food Security Action Plan, and the Zero Hunger Challenge Initiative 2025. These goals will carry over to the new administrative structure (IFPRI 2016).

5. Federalism and Agricultural Extension in Nepal

This section presents past and current extension services delivery systems, and its organizations in Nepal

5.1 Extension and Advisory Services in Nepal

The Nepal agriculture policy (2004) recognized Nepal's extension system as pluralistic in nature. In the public sector, extension is provided under the Department of Agriculture in MoAD and in the Department of Livestock Services in the Ministry of Livestock Development (MoLD). However, extension education is provided by the Council for **Technical Education and Vocational Training** (CTEVT), Agriculture and Forest University, and Tribhuvan University (TU). In addition, the private sector plays an active role in offering improved seed, pesticides, and artificial insemination for livestock, among other services (Suvedi and McNamara 2012). Likewise, there are a number of NGOs, especially in the remote areas that provide extension services to farmers.

With the LSGA, agricultural extension services were devolved to the district level. These services were organized in a network within the five development regions, 75 districts, and agricultural and livestock service centers at the Ilaka level (districts are divided into a number of units, based on similar characteristics and geography), which encompasses multiple VDCs. Junior technicians work at the Ilaka level and report to the District

Agriculture Development Office (DADO) or District Livestock Service Office (DLSO). In order to access extension services, an individual must be a member of a farmers' group registered with a DADO. There are approximately 22,000 farmers' groups and more than 1,500 dairy cooperatives presently in Nepal (Suvedi and McNamara 2012).

The Agriculture Service Centers (ASCs) are grassroots institutions that provide agriculture extension services to farmers. The number of ASCs per district was reduced not long ago and this created pressure in the ASC to cover a larger number of clienteles. As a result, DOA provided flexibility to districts to establish contact centers to effectively utilize the then existing physical resources, such as Agriculture Sub-Service Centers (ASSC) as well as then set up Village Development Committees (VDCs). Similarly, of late farmer's cooperatives are being equally utilized in the delivery of agriculture extension services.

5.2 Agricultural Extension under Federalism

In an attempt to reform extension, many developed as well as developing world agriculture bodies have resorted to strategies suitable for a particular country. Of course, there is no single model that can be a panacea but experiences abound in different continents. Kyle and Resnick (2016) have presented four characteristics that have changed with the new Constitution (Table 3).

Table 3: Major constitutional changes and its implication in agriculture extension service

Characteristics	Prior to2015	New Constitution 2015	Implication
Units of government	National, Development regions (5), districts (75), VDCs (3,915), and municipalities (58)	National government, federal provinces (7), districts (77), local bodies (753)	Human resource and financial capacity at the local body level may be insufficient
Administration of local bodies	Appointments by Ministry of Federal Affairs and Local Development (MoFALD) of officials to administer local bodies	Elections at the national, provincial, local and municipality levels	Potential disconnect between national agricultural priorities

Responsibility for	Agricultural policy	Agricultural policy	Different tiers of
agricultural	development at national	development and	government have
functions	level and implementation at	implementation at both	authority over different
	sub-national level and	national and sub-national	elements of agriculture,
	agricultural extension	levels and agricultural	requiring high levels of
	de-concentrated to DDCs	extension devolved to	horizontal and vertical
	through DADOs and DLOs	sub-national government	coordination
Staffing	Civil service staff at the	Civil service staff at the	Extension staff are
	national, sub-national, and	provincial and local levels	responsible to local
	district levels recruited	recruited through a Provincial	government but hired
	through the National Public	Public Service Commission;	through the Provincial
	Service Commission	federal civil servants continue	Public Service
		to be recruited by the	Commission
		National Public Service	
		Commission	

Source: Adapted from Kyle and Resnick 2016

A number of issues are to be considered while seeking more appropriate ways of managing extension service for agriculture development in Nepal (Jaishi et al. 2013). The extension system should be tied with producers' challenges in delivering the services demanded by them. Institutional reform and organizational development are cross-cutting issues that impact all areas of development. Innovative EAS models have primarily focused on supporting rural women farmers' access to agricultural extension services, through a variety of mechanisms, but they have not been scaled for significant impact (ILRI 2014). Building a strong, accountable and responsive structure is essential to provide a stable environment for livelihoods; and in service provision for sustainable resource management and economic growth. We expect that the specific roles of federal, provincial and local governments in relation to guiding agricultural development at the respective levels will fully crystallize sooner rather than later, as specified in Table 2.

However, as the agriculture sector is endowed with multi-functionality—ranging from employing a large proportion of the population to providing food and income for reducing hunger and poverty—it is urgent that it is guided by fresh vision. Thus far, national guidance for long-term agricultural development has been provided by comprehensive vision documents, such as the Agriculture Perspective Plan (APP) and the Agriculture Development Strategy (ADS). The APP (1995-2015) is already obsolete. The ADS (2015-

2035) incorporated some aspects of federalism in Nepal, but it understandably fell short of analyzing how the agriculture sector could best perform in a federal set-up. Shah and Shah (2006) suggested the new vision of local governance in a multicentered, multiorder or multilevel system. In this context it is very critical to creating and sustaining unit of government, administration of local bodies, agriculture function and staffing.

The concept of Community Agriculture Service Center (CASC) has been put forward recently by the Ministry of Agriculture and Cooperatives (MoAD) with the objective of making service delivery more inclusive, as well as to bring about commercialization in agriculture through best utilization of both local resources and skills of native individuals. However, it is yet to be implemented (SAC 2014).

In a rapidly changing world, farmers need a package of innovations and services, in addition to continuous access to knowledge and information. Having all this under one roof and in a rural setting can greatly accelerate adoption of innovations and increase benefits to farmers (Degrande et al. 2015). Extension was treated essentially as a public good, and with only the public sector involved with technology development and transfer the focus was on spreading the reach of extension (FAO 2010). Extension services are increasingly becoming a part of the decentralization and devolution agenda, which calls for engagement of local government units

and grassroots organizations (OECD 1989). In general, decentralized, demand-driven, and participatory programs tend to be more democratic in design and more successful in implementation (Jaishi et al. 2013).

Nepal's Agricultural Development Strategy (ADS 2014) has articulated the need for creating a Community Agriculture Extension Service Center (CAESC) in each unit of a local body, which will be fully owned and managed by the communities and funded by a combination of resources obtained from the local government, cooperatives, private sector, and the provincial government. Membership will be open to all farmers, agro-enterprises and agriculture extension service providers in the community and their organizations. The center will own and manage its own assets, hire its own staff, conduct meetings, formulate business plans, open a bank account, disburse funds, audit accounts and review activities periodically. Governance rules will establish the composition of the board and

the way board members are elected by the members of society. The center will be entirely managed by the community according to governance rules that are clearly established at the outset. The overall purpose of the center will be to facilitate extension services at the village level and to meet the demands and needs of technical services at the grassroots level. The center may possibly sign memorandums of understanding or contracts with project programs, private institutions, and service providers as well.

As per the proposed plan of the GoN, the contribution of the government to the CAESC consists of seed funding that is intended to leverage local resources. The outcome will be a network of extension service centers that have the chance of reaching all local bodies in the country, are totally managed by the communities, and therefore, more likely to be responsive to the diverse needs of the farming population, and be responsible for raising funds for its sustainability.

Table 4: Characteristics of the Community Agriculture Extension Service Center (CAESC)

Targeting	By type of farmers, by commodity, by market, and agro-ecological region
Devolution	To the lowest administrative level- based on resources and capabilities
Partnership	Major involvement of private and cooperative sector in various forms of public- private partnership modalities
Networking	Capacity building of a network of village extension workers
CAESC	Establishment of CAESC in each local unit that are funded and managed by these units or local communities
Voucher system	Promotion of a voucher system on a pilot basis that would empower farmers to buy the best available extension and advisory services
Market center	Target agricultural market centers to provide extension services
Multiple extension	Adopt multiple extension methods, including farmer field schools
Linkage	Facilitate linkages of farmer groups and organizations with other value chain actors and financial institutions, including commercial banks
ICT	Innovative forms of Information & Communication Technology (ICT)
GESI sensitive	Train resource person to be gender and social inclusion (GESI) sensitive
Women JTA	Increase the representation of women as resource persons
Nutrition	Introduce nutrition into extension programs, particularly targeted to women

Source: ADS 2014

This approach requires considerable capacity building of service providers. There is also a need to have specific programs to target poor farmers, the socially excluded, and the marginal groups.

This pro-poor decentralized approach to agricultural extension challenges both the wide scale privatization which implies removal of state subsidy, and the domination by the state in the

delivery of services. The approach is focused on identifying appropriate public and private roles and partnerships between them. The approach introduces private-type performance and management practices into the public sector including charges for services and performance assessment by clients, and an element of payment by results (ADS 2014). Furthermore, this approach envisages a greater role for the local government as it is more directly in contact with people's needs and opportunities than is the central government. This assumes that local government is more able and accountable in responding to poor people's needs and opportunities.

In the framework of federalism, the decentralized approach should acknowledge the principle of subsidiarity, which ensures delegation of power and authority to people at local levels. In another sense, it is also right to address the state and societal restructuring in terms of total transfer of resource-based wealth and power from elite to diverse poor groups and sections of society.

5.3 Capacity Enhancement: Need of Extension Personnel in the context of Federalism

Capacity development is fundamentally about change and transformation - at individual, organizational, sectoral, and societal levels - along with long-term investments. Core extension competencies needed among agricultural graduates and postgraduates in agricultural extension. Core competency domains are needed to be identified and prioritized based on requirement and context (MANAGE 2018). Experience shows that capacity development cannot be confined only to training, although this has often been the case in the past. It is also important to look at the need for organizational change and review the legal and other aspects of the institutional framework. So the future will call for more able, more independent, more clientoriented extension workers (Gwyn and Garforth 2005). The emphasis will be on the quality of interaction between agent and client rather than on the movement of "messages" through a hierarchical system.

Agricultural extension has always been the subject of criticism, both from farmers and local leaders,

incompetent at providing solutions to clients' problems and information at the knowledge and skill level. The National Workshop on 'Capacity Needs Assessment (CNA) for EAS in Nepal' held from 31 May-1 June 2016, has clearly indicated the need for capacity strengthening of Agriculture Extension Service Providers at three levels: field level, middle management level, and senior management level. The rapidly changing context, both at local and global level, had demanded competent human resources in the service delivery sector. In this context, the agriculture extension service providers also need to be more competent and possess the latest knowledge and skills of agriculture practices (NAES/AESA 2016).

Further, in the new federal context of Nepal, capacity building in areas of new administrative structure, new demand and supply mechanism, new priorities and programs need to be known by all those who are involved in the process. There is a need to strengthen new subject matter knowledge and skills, especially for federal, provincial and rural municipality level planning, implementation, and monitoring and evaluation. Because the location-specific problems/needs are diverse, demand for services are innumerable and require new knowledge and skill on the part of extension workers. This has an implication for competently qualified manpower and so on (SAC 2014). Local and provincial government will have to enhance their capacity to develop agriculture programs based on the roles and responsibilities laid out by the Constitution of Nepal 2015, and the Local Government Operation Act 2017. However, local levels and provincial governments have been operating with just 30 per cent of their staff strength, thereby affecting day to day administration of government, and thus also affecting extension services. Most local and province levels of government across the country had been functioning with skeletal staff. Federal government is unable to send staffs to the local level, as the old structure of the district and regional levels are still functioning.

5.4 Concept of State University in a Federalized context

In the context of newly introduced federalization Article 57 (distribution of state power) Schedule 6.8 clearly expresses the concept of state universities, higher education, and libraries for educating and empowering the people, provides the basis for establishing state Land Grant Universities (LGU), It is based on a comparative analysis of US-based land grant institutions and Historically Black Colleges and University (HBCU) missions and contributions. In particular, Nepal can relate to the US-based practices of mission and cooperative extension, relevance of HBCUs and the new life they promote of racial justice and diversity for African-American farmers and minorities. These ideas and practices opened a new window during the analysis of Nepal's inclusive constitutional provisions and relevant policies, as well as the structural features of Nepal's stagnant economy (Nepali 2018).

Similar to the Morril Act (1862) pioneered by US President Abraham Lincoln (and its second amendment in 1890), new provincial state assemblies should take the initiative to develop state universities for inclusive transformation using an emancipatory development model (http://ag.fvsu.edu/index.php/extension). Academic institutions should, therefore, have primary accountability to defined territories and communities beyond academic excellence build a strong university-community relationship, and provide a rationale and plans for productive use of available natural and human resources in society.

5.5 Suggestions for Local Government for Community-Based Agriculture Development

Based upon review, reflection and learning from US and other global practices, the following suggestions should be taken under advisement regarding Inclusive Rural Transformation Model for overall community development at local levels (Nepali 2018). Rural extension and community development can be developed as a three-way partnership. The three partners are: i) the landgrant university/college in each state or defined location, including rural municipalities or urban municipalities; ii) the federal and state government (through the Ministry and department); and iii) the local government (through the rural or urban municipalities and Community Agriculture Extension Service Centers).

True to this model, extension or community development programs in a state, or in a defined part of a state, can be operated in collaboration with local government in alignment with the state. Local government can develop a larger framework for community development intervention models in which various non-state actors (e.g. Non-Government Organizations, Community Based Organizations, Community Forest Users Groups, Water Users Groups, Mothers Group and Youth Club) can work together, following the one-door policies.

Similarly, at local levels in Nepal, various initiatives, such as establishing community-based library, educational programs, local food councils, local community land trust for conservation of public land, promotion of peri-urban/urban agriculture, local human rights watch, media watch, youth-council and employment initiative, land and food-based justice, anti-corruption monitoring watch, etc., can be initiated by colleges and the local government.

To illustrate, given that agriculture is the mainstay of Nepalese rural society, a 'Vision for Local Agriculture for Food and Land' can be crafted for overall local development by promoting equitable access to resources, opportunities, and services to local communities. This work can be coordinated by diverse, committed and engaged stakeholders from all sectors of the land and food systems. Consideration of local-level issues and challenges, institutional support for local agriculture, food, land and associated issues can be done. Farmer land access issues, such as regulatory blocks, difficulty accessing wholesale markets, various barriers to entry for young and starting farmers which are exacerbated in marginalized communities—call for a broad and multi-layered response. Strategies in marketing, policy change, incentivizing local purchasing, and opening pathways to agricultural transformation (for those who have been dispossessed of land or have had unequal access to other resources and opportunities) will alleviate these issues.

Upon examination of manifestoes of various political parties presented during the last local election held in 2017, it was found that the major political parties have focused on local land use plans, community-based cooperatives,

employment security at the household level, income security, local food security and vision, and healthy and nutritional food for all. Post-election, winning parties' political commitments to their local election manifestoes can support and speed up the rural agricultural transformation processes at the local level.

For sustainability of the proposed local-level plan and institutionalized interventions, assemblies and legislative bodies of rural municipalities can initiate and regulate the local policy-making process via various community-based policies, laws, and by-laws (e.g., land use plan, Natural Resource Management policy, local food vision, etc.). Timely and inclusive processes on the part of every aforementioned entity will be critical to achieving sustainable change for the better. After all, these policies are meant to improve the quality of life of the general public; therefore, active participation of beneficiaries in policy development processes could foster the inclusive transformation processes.

6. Conclusions

The Government of Nepal has always been making efforts to facilitate the evolution of a self-sustaining extension system through farmers' groups and their empowerment so as to make them self-reliant and capable of articulating their needs and problems effectively. However, its intentions have hardly matched up with the resource requirements or capacities of the public extension system. The extension worker: farmer ratio continues to remain very wide of the mark. The restructured local government under the federal structure may emerge as an opportunity to create a client-responsive extension system that serves the majority of people.

One of the purposes of local government is to supply goods and services; the other is to involve citizens in determining local and specific public needs. To fulfill these needs, several acts and regulations had been implemented in Nepal over the last six decades. Recently, the focuses of these attempts are to provide a legal basis for the decentralization of power from federal authority to municipal and rural municipal.

The CAESC-led decentralized agriculture extension approach is cost effective, and provides a sustainable service delivery mechanism for extending basic and innovative technology to farmers. This modality ensures effectiveness, relevance, and reliability –by creating accountability, authority, autonomy, coordination, along with incentives and transparency via improved agricultural governance.

In theory, under the federal structure agricultural extension services can serve communities better as it aims to be client responsive and accountable to its consumers at the village level. However, poor understanding of federalism that has only recently emerged from the persisting centralized and feudal conceptions, limited practices of democratic norms and values primarily due to the lack of understanding of local governance, and limited commitment of political actors and policy makers to federalism, may derail the good intentions behind federalism. The dividends of state restructuring take time to be realized, and state restructuring should be given sufficient time

to deliver. Despite some limitations, Nepal's considerable experience with local governance and decentralization will hopefully facilitate its adaptation to the new federal structure.

During the past decade, Nepal has institutionalized the Fourteen Point Planning Process, which has given citizens the capacity to participate in public forums on local development, and to plan projects and monitor their outcomes. More than a decade's experience with planning local agricultural development projects has taught citizens how to articulate their demands concerning the priorities of local agricultural development (Kyle and Resnick 2016). Thus, Nepal's strong history of participatory planning will make the transition into a federal system—with more demand-based agricultural services—easier.

Ultimately, the community-based inclusive transformation model (exemplary works and initiation) in close association with federal, state and local government can be designed and implemented for overall inclusive transformation by taking into account local human and natural resources, local initiative and innovation, in conjunction with commitment to social diversity and inclusion for Nepal's future transformation.

To illustrate, given that agriculture is the mainstay of Nepalese rural society, a 'Vision for Local Agriculture for Food and Land' can be crafted for overall local development by promoting equitable access to resources, opportunities, and services to local communities. This work can be coordinated by diverse, committed, and engaged stakeholders from all sectors of the land and food systems. Consideration of local level issues and challenges, institutional support for local agriculture, food, land and associated issues can be taken into account. Farmers' land access issues – such as regulatory blocks, difficulty accessing wholesale markets, various barriers to entry for young and beginning farmers (which are exacerbated in marginalized communities) - require broad and deep responses, strategies in marketing, policy change, incentivizing local purchasing, and opening pathways to agricultural transformation

(for those who have been dispossessed of land or have had unequal access to other resources and opportunities) will alleviate these issues.

In conclusion, based on political mandate, commitment, constitutional provisions as well as the aspirations and expectations of the people, political decisions should take into consideration key aspects of inclusive agrarian transformation.

After big political changes, it is the right time to take a new political course and decisions for state restructuring, based on political mandates and constitutional provisions. Taking as example a chapter from the political decision-making process of US President Abraham Lincoln, the new state assembly should take the initiative to develop their own state universities for their own inclusive transformation and development.

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