

Rural Livelihood Transformations and Local Development in Karnali Province, Nepal: A Policy Assessment

Kabi Prasad Pokhrel*

Professor of Geography, Research Centre for Educational Innovation and Development, Tribhuvan University, Balkhu, Kathmandu, Nepal

***Corresponding Author:** Kabi Prasad Pokhrel, Professor of Geography, Research Centre for Educational Innovation and Development, Tribhuvan University, Balkhu, Kathmandu, Nepal.

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Abstract

This paper discusses the rapid changes in rural morphological structure and livelihood that are altering the development landscape at the global level. The local and regional economy have experienced major structural shifts, with the emergence of stronger markets in middle-income economies, rising urbanization and demand for food, and several development demands. At the same time, climate change, erratic energy prices and complex and protracted conflicts have delivered a variety of shocks. Several regions have seen large-scale population displacements within and across national borders, and the social and political upheavals linked to unemployment are deepening. That progress has been uneven, and economic inequality is increasing. Sustainable development goals (SDGs) have explicitly recognized the central role that rural development plays. However, they also face long-standing barriers to accessing resources, technology, inputs, finance, knowledge and markets. There is also emerging opportunities to capitalize on changes in the world around them. Thus the paper focused to make rigorous policy analysis that it examines rural development in the context of the transformation of rural areas and the socio-economic life style i.e. rural transformation and structural transformation in Karnali Province, the least developed and rural based province. By embedding rural development within rural transformation, and that within structural transformation, developments in urban municipal and rural municipals have been viewed together and seen to be interconnected. The paper further discussed in policy reference of inclusive rural transformation as a process in which rising agricultural and non-agricultural productivity, increasing marketable surpluses, expanded off-farm employment opportunities, better access to services and infrastructure, and capacity to influence policy all lead to improved rural livelihoods and inclusive growth. Inclusive rural transformation has considered as a critical component of inclusive growth as a whole, and of sustainable development in all its dimensions like social, economic and environmental. It is both a vision and a lens through which to interpret historical processes of rural livelihood transformation in Karnali Province in Nepal.

Keywords: *Rural Livelihood Transformations; Karnali Province; Nepal*

Introduction

Rural transformation occurs within a broader context of economy-wide structural transformation, which is both caused by and affects agricultural sector and is interlinked with recent phenomena of rapid urbanization, dietary changes, food value chain transformation and intensification in farm technology [1]. Nowadays rural areas vary enormously across different parts of the world, and even within single countries according to the different types of economic activities performed, different levels of productivity and value added, and different social and environmental conditions. Urbanization is much more advanced in developed countries, while the rural population is still growing in developing countries. Even though in some places economic development and recent information revolution have impacted positively the rural transformation process in bringing prosperity and bridging the rural urban gap, in others, especially in the global South, the inequalities between rural and urban spaces are widening, leading to negative feedbacks on the transformation process, which is impacted also by climate change and/or processes of environmental degradation [2].

Rural transformation that resulted in reinforcing the capacity of agro-food systems to valorize specific territorial resources and social relations of proximity have shaped a new paradigm on rural development, outlined in rural development modality, which is driving also

a transition in rural policy approaches toward achieving the sustainable development goals (SDGs). The new policy orientation adopts a territorial approach shifting from subsidy-based support to agriculture toward investment-driven development of rural territories. The root principles of such an approach lie in recognizing that (1) rural areas vary enormously across the world, but are all over inextricably linked to cities, regions and national contexts; (2) governance is a key factor in success or failure of rural development projects; (3) environmental sustainability is a pre-condition to inclusive rural transformation; and (4) in different places agro-food systems are embedded to a different degree in territorial features and intimately linked with other activities such as tourism, nature conservation, industry, health care, education. Policy targets include reconfiguration of the linkages between rural and urban spaces, strengthening small scale farmers' organizational capacities, diversifying rural economy, promoting community mobilization to facilitate rural people's access to information, supporting collective action so that rural people take ownership of their own development.

A central focus of such approaches is on sustainable agriculture and food systems. displays main drivers for food system transformation, which directly impact the rural transformation processes, through re-configuration of four relationship axes between: 1) agriculture and the environment, 2) actors of the food value chain that connect production and consumption 3) urban and rural areas 4) food supply and food consumption, i.e. the food environment. Food systems can be reconfigured by redesigning production, distribution and trade systems and promoting responsible food consumption patterns so as to assure desired outcomes along all four axes. In order to achieve these results, it is necessary to create an enabling environment, which comprises cultural and behavioral aspects, tacit and explicit norms and standards for knowledge creation, use and diffusion, private and public policies, institutions and governance mechanisms.

In the Karnali province migration cannot be considered as a unidirectional movement from rural areas to cities; it has instead been shaped by a chain of connections in which rural and urban livelihoods interact on a movement continuum. Temporary movement whether daily, weekly or seasonally characterizes the main mobility pattern of rural households crisscrossing the province in search of employment, services, commercial goods and education as well as for social reasons. More and more people living in rural areas go to small towns and service centers in search of consumption goods, services and labor opportunities. These temporary flows of people are complemented and linked with more permanent flows of mobility which makes the areas under study highly dynamic in terms of mobility inflows and outflows. Some of these flows are year-round, but there are also large fluxes during certain periods of the year such as during land preparation, harvesting and other key periods on the agricultural calendar. Increased mobility flows also are related to important social events such as public holidays and local festivities that attract migrants to their home settlements [3].

At the same time, non-agricultural employment is becoming important in the province level although to a varying extent. There seems to be a general tendency towards higher dependency on agriculture among those farmers who produce the fruit crops of the regions when compared to the farmers cultivating other crops. This might indicate a tendency where the more commercial farmers increasingly specialize in a fruit crop, while many of the peasants choose to base their livelihood on a combination of agricultural and non-agricultural activities. In some cases, this may reflect a trend of progressive dispossession of some segments of the rural population. Whereas the opportunities for finding non-agricultural employment within the province level used to be poor, at present some of the spatial locations are experiencing new opportunities for earning non-agricultural incomes. The increased mobility and hereto related tourism and market development of the rural landscape has generated opportunities for livelihood diversification and non-farming economic activities. These economic dynamics provide several households with an economic buffer to invest in improved housing [4].

Advancing rural development policy and analysis

The New Rural Paradigm (NRP) is a response to changing conditions in rural areas. Statistical evidence shows that agriculture is not the main source of rural jobs and incomes anymore and that several rural regions perform in line with urban regions in terms of economic growth. This, in turn, led to changes in the way governments think about rural policy.

The shift towards growth has a profound effect on rural development strategies. But it requires large amounts of information and the involvement of sub-central entities that pool knowledge regarding untapped resources, emerging needs, and short-term trends in rural communities. These entities can be local governments, business or other intermediate stakeholders. At the same time, the influence of institutions lobbying in favor of a given territory such as national farmers' associations is declining. This is particularly evident in the Karnali province, where funds allocated to direct payments to farmers have been shrinking in favor of support for rural development.

Beyond the paradigm

Today, there is a need to move beyond the paradigm NRP which is the basic paradigm as a new policy environment to address the issues of financial crisis and its aftermath at the province level. The New Rural Paradigm is a pertinent opinion shared by the international

rural policy stakeholders present at the 8th Rural Conference in Krasnoyarsk, Russia in 2012 [5]. At the same time, there was widespread consensus that the NRP has yet to be fully embraced by world communities. This policy review paper tries to prepare a synopsis for guiding the rural livelihood transformation and to strength the spatial evidences that provide the base for rural transformation in relation to sustainable livelihood improvement of rural population in Karnali province. Information was gathered from various secondary sources and assembled information was analyzed using content analysis method and policy review approaches. The paper mainly concentrated to develop and adopt policies and programs aligned with NRP principles which are contextualized at the province level. This paper could help to understand the underlying conditions required for policies to be effective. And a picture has emerged as to where the province government would be helped to successfully shape rural policy change. Overall the paper conveys four points message to extend the conceptual framework of the NRP into an implementation strategy that:

- Reflects the last ten years of work by the rural development agencies along with the national government,
- Recognizes the change in perspective in the different parts of the province on what they want to achieve with rural policy,
- Incorporates the evolution of socio-economic conditions in rural regions of the province,
- Integrates rural development policy in a broader governance system to deliver better policies and improve well-being in rural areas.

Action for new rural policy

After the rigorous analysis of the rural policies regarding morphological transformation and livelihood improvement new rural policy has been framed and suggested to consider as the main departure of the comprehensive development of the Karnali province. Therefore, at the province level needs to implement and integrate it with the following ideas of new rural paradigm that present a road map for the transformation of rural settlement morphology with functions in the Karnali Province.

Build upon past work

Rural policy in the province level needs to be focused on support for specific sectors such as agriculture and forestry. The typical approach is to provide sectoral subsidies to equalize income levels. Firms, communities and individuals were deemed entitled to specific subsidies by virtue of their rurality. By contrast, the NRP shifts the orientation of rural policy from supporting specific sectors to a holistic approach that try to identify how the various components of a local economy interact. The responsibility for developing policy will equally be shared between the top (central governments) and the bottom (local and province level stakeholders).

The new rural paradigm can be characterized as an investment approach in which policy makers assess the costs of policies and identify the expected outcomes to ensure that there are positive returns. The structural transformation of rural economies-mostly due to reduced employment in agriculture-became evident in Nepal between the 1980s and 1990s. The development partners assisted governments is assessing the transformation as well as identifying new economic drivers and new policy approaches [2]. This process generated the new dimension of rural development (2006), advocating a place-based approach to rural development based on evidence that spatial locations have diverse economies in which agriculture is often a marginal activity. Rural communities need a flexible policy framework that can adapt to their specific needs and promote investment and complementarities among different policies.

Since 2007, Nepal has used the equality approaches for comprehensive development of each of the region as to develop the territory identity as a benchmark to assess national development policy. Rural areas development reviews show that all the spatial locations of the countryside's development frame has been built upon a general approach to rural development but have been slow in meeting the targets of rural livelihood improvement and morphological transformation as guidelines of the new rural paradigm (NRP). While the committee process, i.e., the international policy dialogue among development partners, provides a mechanism to discuss broad policy concepts, the implementation agenda needs further mobilization at the province level.

Identify appropriate concept and definitions for rural transformation

The traditional definition of rural as not urban still lingers in many regions. Urban typically is defined in terms of a minimum population density and minimum settlement size. As place-based policy becomes more common, existing definitions of urban and rural become problematic [6]. Since the 1990s, Nepal has been working to harmonize international data regarding regional typologies. This work supports countries as they exchange practices and as they tailor their policies to the features of regional communities. A simple and ef-

fective territorial classification is of paramount importance to ensure that policy options match the needs of territorial communities. The regional typology is based on two main territorial levels. The Territorial Level 2 (TL2) is the first level below the national one. In most cases TL2 regions are administrative units. TL3 is the territorial level above the local level. TL3 are also administrative units and classified as predominantly urban, intermediate and predominantly rural. Within this taxonomy, roughly two-third of the Karnali Province population (76%) lives in predominantly rural areas, amounting to 14 Lakh people in 2018. Capitalizing on the availability of spatial information (such as GIS) and taking into account the changing human geography in the province level it has been developing an extended territorial classification mostly based on settlement distribution dwelling densities, location of main urban centers and journey-to-work flows [7]. Within this approach, rural settlements classified into close to cities or "remote". This places about 80 percent rural inhabitants in rural regions close to cities, and 20 percent in rural areas that are further removed.

Embrace a new rural narrative

Today, a new highlighted the growth potential of rural regions. The widespread perception that rural is somehow synonymous with decline is simply wrong. Indeed, rural regions in the Karnali Province recorded an average annual rate of growth of GDP per capita of less than 1 percent over the decades lesser than the average growth rates of urban and intermediate regions growing at 1.5% and 1.4%, respectively. This is evidence that rural regions are converging. The trend of convergence has implications for overall economic growth performance due to the highly skewed distribution of regional growth contributions to aggregate growth. This distribution is made up of a few very large regions and a large number of small regions. This suggests that mobilization of the growth potential through the convergence of a sufficiently high number of rural regions can potentially have effects on aggregate performance because of the large number of these smaller regions and the slow decay of their contribution to growth (generating a fat tail distribution), producing a cumulative effect that could be significant.

Narrative is needed to clarify for all citizens that rural regions make important contributions to national objectives, including economic development and prosperity. The contributions are different, yet complementary, to those made by metropolitan areas with positive outcomes for both.

Develop measures of rural well-being

The well-being of regional and rural inhabitants is a crucial policy issue and the Karnali province need to work on new ways to measure it. Where people live matters. Quality of life is shaped by a multitude of conditions ranging from income and jobs to education and civic participation. Many of the most influential factors for people's well-being are local issues such as employment, access to health services, pollution, natural resource conservation and utilization and security. Improving lives entails making the places where people live better. This new metric encompasses economic, social and environmental dimensions and approximately reflects the concept of prosperity a predominant theme of the rural morphology transformation and livelihood improvement, the metric is enriched by with a regional dimension (How's life in your region indicators), which takes into account the region or locality with which citizens associate themselves. This has a dramatic impact on policy design [8]. First, it demonstrates the value of territorial analysis (the Karnali province is currently working to bring well-being indicators to the lowest possible territorial level). Second, it forces policy makers to go beyond the boundaries of their own policy sector in order to anticipate potential interactions with other policies and, when possible to capitalize on complementarities.

In several key indicators, rural well-being is competitive. The average values spanning all nine components of the regional well-being indicators are displayed across the four quartiles ranked from urban (group 1) to rural (group 4). The urban dimension is not necessarily associated with higher levels of well-being, as rural dwellers can count on better environmental conditions and more affordable housing with performance measures such as access to jobs and income in line with those of urban municipalities [6].

New policy approach

Most of the developing countries like Nepal struggle with the implementation of their rural development policies. The old way was easier, simply providing subsidies to specific sectors. But priorities have changed. Today, governments have to find new ways to promote broad-based economic development in low-economic development areas. A larger number of constituencies must be involved in the policy cycle. Also, policies must take into account the specific characteristics of each rural region, evaluating accessibility, amenities and assets, human and social capital, underlying geography and other salient factors. There are no one-size-fits-all solutions.

For this province, promoting growth in rural areas has been limited to investment in infrastructure, i.e. transport, broadband internet, etc. Thus, policy should be focused on outcomes that involve limited transaction costs and that are relatively easy to produce and measure. While this may circumvent new levels of complexity in rural policy making, there is no clear evidence that infrastructure alone generates sustainable economic growth [9]. Likewise, the effort to make service delivery more efficient is often limited to remote rural communities where service issues are easiest to identify. Yet, accessible rural areas account for the majority of the rural population, with growing populations and keen pressure to increase the variety of services provided. Both types of communities must be targeted.

Policy coordination

The majority of public policy in Nepal is delivered by specialized agencies, departments or ministries that provide a narrow range of specific programs nationally. This approach results in policies and programs that do not vary by type of territory. Also, individual agencies have limited incentive to coordinate with each other in the policy design phase. Once delivered at the province level, new policies and programs can end up being incompatible or worse, conflicting. Social and human geography of Nepal provides evidence supporting the need for coordinated sectoral policies when promoting regional development. Governments should frame interventions in infrastructure, human capital and innovation capacity within common policy packages. These factors would have a number of positive effects, including:

- Enhancing the capacity of a given territory to absorb public and private investment,
- Curtailing the level of dependency (appropriation of rents from external sources),
- Encouraging business development and entrepreneurship,
- Building a bridge to engender confidence in the rural region and attract private sector investment.

Promoting functional interactions among policies

OECD [5] illustrates that regions that are able to implement integrated policy packages have, on average, better economic performance. This also holds true for rural regions. In order to have an impact on rural development, policy makers must adopt a more strategic and inclusive approach. They must interact regularly with their peers in charge of portfolios implemented in, or affecting, rural communities. As it is highly challenging to achieve this level of coordination within the decision chain, the public sector needs to learn how to prioritize policy coordination. There is a need for institutions that serve as coordination facilitators, promoting the exchange of information among different policy makers, in different sectors, and across levels of government.

A bottom-up approach does not come easily to national governments. In most rural economies, federal governments continue to play the dominant role in rural development and often define the menu of options available to intermediate and local levels of government. Moreover, funding for local governments from national sources is generally tied to specific purposes and local governments have only limited abilities to raise additional revenue, particularly since the financial crisis. What's more, rural development policy is still relatively marginal in national policy frameworks and this makes it challenging when it comes to guiding and organizing policy complementarities. And yet key national policies such as healthcare, education, innovation and others would benefit significantly from receiving guidance from rural development policy. Although regions vary in terms of assets and comparative advantages. Recent research illustrates the importance of policy and institutional factors in addition to the traditional drivers of growth (human capital, innovation, accessibility and infrastructure).

For instance, formal and informal institutions must facilitate negotiation and dialogue among key actors, mobilizing and integrating them into the development process. They must create linkages among private, public and education sectors while strengthening the region's voice in dealing with other regions and countries.

Capitalize opportunities from rural-urban interactions

Urban and rural areas enjoy different and often complementary assets. Better integration between urban and rural areas is important for socio-economic performance. On average, denser territories where urban and rural areas are geographically closer, grow faster (population growth and GDP per capita) due to positive spillovers. Similarly, densely connected rural-to-rural relationships benefit from more rapid growth. Urban and rural territories are interconnected through different types of linkages that often cross traditional administrative boundaries and challenge policy frameworks. These interactions can involve demographic, labor market, public service and environmental considerations. They are not limited to city-centered local labor market flows and include bi-directional relationships. Each type of in-

teraction encompasses different geography or functional regions. Flexibility is required in the space considered for governing these complex relationships. Yet, national and subnational policy frameworks are often unprepared to organize and orient urban-rural interactions.

The empirical evidences show that rural-urban dynamics in developing countries and documents the fact that partnerships have emerged in several territorial communities with the aim of handling complexity, coordinating policy delivery and up scaling service provision. It identifies four factors having a positive effect. These are:

- Clearly defined objectives,
- Understanding the interdependence of rural and urban areas,
- Democratic participation,
- Leadership.

Rural-urban partnerships are shaped by external factors, by the institutional environment and the characteristics of the particular partnership. The national policy assessment needs to shed light on many of the challenges facing regional partnerships. For example, private sector participation, crucial for enhancing connections with the regional economy, proved difficult to achieve in most cases observed. Another issue was the difficulty of monitoring and evaluating the results of the partnership and its impact on regional conditions. Co-operation appears to be more difficult when the differences in size, resources and capacity between urban and rural areas are large. Other factors detrimental to effective rural-urban partnership are regulatory and political barriers, lack of trust, and policy fragmentation.

Enhance rural productivity

The investment approach underpinning the new rural paradigm requires that firms in rural regions be competitive if public investments in rural development are to have a positive rate of return. So far, this has been an important challenge for national rural policies as they shift away from a focus on subsidies. The challenge has two main causes they are the stems from the inherent nature of rural territory and the inability of most governments to frame rural policies in a way that address the needs and challenges of rural firms. Unlike the situation in cities, firms in rural regions tend to be more directly connected to specific features of the local geography, whether it be the presence of a natural resource, such as good land, minerals, strong and stable wind, etc.; the specific terrain that provides harbors or opportunities for skiing; and even the presence or absence of a transportation link, such as a major highway or rail line. For virtually all rural firms, the specific features of their natural environment condition their activity. Rural firms also face the challenge of existing in truncated local economies where only a limited number of economic activities occur. These both limits their opportunity to source inputs from local suppliers and their ability to sell to nearby customers. The former creates problems in developing a supply chain, while the latter can make developing an export market vital if the firm is to achieve minimum efficient scale in production as well as forcing the firm to absorb significant shipping costs.

In sum, rural businesses must adapt to the characteristics of rural economies which include low density, long distances and lack of critical mass. These challenges create pressure on rural firms to increase productivity in order to be competitive with other firms that may be located closer to markets or have lower cost inputs near to them.

In a dynamic economic environment where transport and energy costs are volatile the competitive position of rural firms can change rapidly. Similarly, if customer preferences shift, it may be hard for rural firms to detect the adjustment quickly because of their distance from the customer. Most importantly, for several decades rural regions have been impacted by three major trends:

- The first is a more open economy that has seen the shift of many lower- skill manufacturing jobs from rural regions of the most industrialized countries to developing and mid-tier nations.
- The second is the steady substitution of capital for labor in the natural resource sectors - agriculture, forestry, mining etc. that has increased productivity but reduced employment.
- The third is a fairly recent but rapid shift from a significant rural labor surplus to an imminent labor shortage as declining birth rates and youth outmigration to cities, especially by young females, is leading to an aging and shrinking workforce in many rural regions.

As a result there have been major adjustments in many rural economies that have led to the loss of major sources of employment and income. Some regions have been unsuccessful in restructuring their economies while others have identified new opportunities for growth. In particular, rural regions that are near urban regions have seen increased opportunities both in providing services to urban populations, but also in areas such as logistics functions, wholesale and other activities where large amounts of space and good transport connectivity are required. Remote rural regions with good visual and active recreation potential have also prospered as urban residents take advantage of their attributes. Finally, reductions in the excess supply of labor in resource dependent regions have resulted in higher wages for remaining workers that reflect high capital-labor ratios. What is needed now is national policy that supports ongoing adjustments rather than impeding them. This can initially entail losses in income and employment as unprofitable firms are forced to close. But for rural regions to contribute to national economic growth objectives, policy has to be consistent with market forces. Firms are only viable if they are profitable and to be profitable a firm must produce a marketable product at a price that buyers accept.

Identify and adopt innovative rural service delivery mechanisms

The service or tertiary sector in province economies now accounts for the largest share of income and employment. Access to an appropriate set of public and private services is crucial for the quality of life of citizens and the competitiveness of firms. This makes service availability a central feature in rural development policy and strategy. However, rural regions face a particular challenge in the form of relatively high costs of service delivery due to a number of factors.

If rural communities are to play their full role in strengthening national economies, it is important that the correct set of services be in place. The challenges associated with delivering public services vary across different regions and countries. However, certain policy strategies used to overcome the challenges illustrated above can be considered as “good-enough (if not necessarily best) practices that could provide ideas to governments facing similar problems. These practices often emphasize innovation (alternative methods to achieve the result) and inclusiveness (co-design and co-delivery). Innovation and inclusiveness fit nicely into the emphasis NRP places on a holistic approach. For instance, because end users at the community level are an integral part of the process, there are far better odds of providing services that are useful in the community and of providing them in a cost-effective way. More specifically, these good-enough practices include the following.

Consolidation, co-location and the merger of similar services

Consolidation involves concentrating customers on a smaller number of service locations. It increases effective demand by increasing the size of the service territory for each remaining location. One example would be the merging of several weak local newspapers to create a single regional paper that has more viability. Co-location is another approach that seeks to build demand. Basic overhead costs - energy, security and administrative expenses - can be pooled, generating economies of scope. If post office services are consolidated with a shop, people can obtain their mail and purchase food in one trip. Finally, service merger takes similar or substitute services and combines them into a single entity.

Alternative delivery mechanisms.

Where the demand for services is widely dispersed, it may be more efficient to bring the service to the user. For example, adopting mobile service delivery approaches - bookmobiles that bring library services to communities that are too small to have a physical library or mobile dental clinics. The Internet offers the possibility to provide services in rural areas and for providers in rural areas to offer services outside their immediate territory. Telemedicine allows x-rays and other diagnostic services conducted in rural areas to be processed and analyzed elsewhere.

Community-based solutions for different types of providers

Some rural communities have volunteer fire departments. Others have fire departments that are operated by local governments. In some communities there are for-profit village shops, in some villages there are community owned shops that provide equivalent access to services, but which operate as social enterprises.

Improve quality and marketing

Technology can help rural residents provide and access information about service quality and about alternative providers. Geolocation facilitates matching between the supply of and demand for services.

Alternative energy sources

Renewable energy can reduce fuel poverty that can be a common feature of remote regions, by allowing isolated communities to produce their own energy instead of importing expensive conventional fuels. Increasing the use of affordable and reliable energy in remote rural communities can improve their capacity to deliver goods and services. For instance, the availability of reliable electricity is essential for a local restaurant that needs a refrigerator.

Innovate - create a new service to achieve better outcomes

In rural areas there is often insufficient business to support a full range of services provided through independent firms. A region may not be able to support a full-fledged home repair business, but a travelling handyman that operates out of a fully equipped vehicle and is scheduled by telephone or Internet might flourish.

Service delivery in rural areas is more costly than in urban areas a key challenge for governments at all levels. Rural policy needs to act as a platform coordinating national and sub-national resources to guarantee access to services and to identify public goods that are conducive to economic development. However, the higher costs must be weighed against the benefits to a small share of the total population along with the overall benefits to society. This will naturally depend on the priorities of countries.

The role of innovation is significant in order to drive inclusive and sustainable rural transformation it is necessary to create favorable conditions for innovation, facilitating the generation of new knowledge and effectively translating new and existing knowledge into appropriate use [1]. At present, the prevailing approach in food and agricultural research and innovation is reductionist, characterized by fragmentation of academic disciplines, tendency to overspecialization and focus on only single phases or issues along the food chain at a time. However, sustainable rural transformation cannot be described or planned using exclusively linear functions, while neglecting multiple interdependencies and interrelations among food chain actors, supply and consumption, urban and rural areas as well as agriculture and the environment. The complex and dynamic nature of food and agricultural systems and the multifaceted rural-urban interrelationships require the adoption of a more systemic thinking. The systemic approach (i) integrates different disciplines and perspectives; (ii) does not single out the system's components but studies the complex interplay among them; (iii) consolidates local, traditional and formal scientific knowledge; and (iv) considers production systems together with their determinants, from ecosystems and natural resources to food chains and market drivers [10]. The impressive advances of information and communication technologies (ICTs) and artificial intelligence allow for the gathering systematization, analysis, and sharing of large amounts of data and therefore can offer substantive contributions to govern complexity.

Improve the international policy dialogue

One of the enablers of the New Rural Policy is mutual learning supported through international dialogue. Up to this point a key challenge has been promoting a more inclusive, bottom-up governance system. Governments of each level should be committed to supporting countries as they implement a modern rural policy. This is done by facilitating the exchange of international policy practices, providing countries with opportunities for knowledge sharing, developing networks and toolkits. But challenges remain. These include higher transaction costs and a greater need for information concerning available investment opportunities at the subnational level.

Conclusion

The new policy paradigm for rural development recognizes that territorial differences could result in different trajectories for sustainable development, which at level of tools could not necessarily lead to identical conceptualizations of sustainability principles for all rural territories across the province. In order to deliver information tools which are useful in the collaborative design and assessment of innovation capable of triggering sustainable rural transformation processes at the community level, it is of fundamental importance developing sound theoretical frameworks and conceptualizations which allow for (a) shifting the focus of analysis from value-chain/sector-based approaches to integrated landscape approaches targeting the whole economy of a territory, and (b) collective reflection on values that determine what is considered a sustainable food and agriculture system for a specific territorial context and its relations with other spatial locations within the regional economy.

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