INNOVATION AND MODERNISING THE RURAL ECONOMY
Welcome from the Organisation for Economic Co-operation and Development

On behalf of the OECD, I am delighted to welcome delegates to its 8th Conference on Rural Development in the Russian city of Krasnoyarsk. We are grateful to the government of the Russian Federation and to the authorities of Krasnoyarsk Krai for their initiative in offering to host this important event, which we are confident will provide an opportunity for fruitful discussion of common concerns with respect to rural development.

This meeting follows on from the 2009 OECD Rural Development Policy Forum in Québec and the All Russia Regional Forum in St Petersburg the following year which focussed on the themes of vulnerability and opportunity in rural areas. In Krasnoyarsk, we will explore concrete, feasible solutions for rural areas facing the twin challenges of urbanisation and modernisation.

I am confident that the exchange of experiences as to how to confront and overcome these twin challenges, will stimulate mutual learning in the best tradition of OECD’s policy dialogue. I wish all participants in this 8th OECD Rural Conference a fruitful and intellectually stimulating time in Krasnoyarsk.

Rolf Alter
Director, Public Governance and Territorial Development Directorate
OECD
On behalf of the Ministry of Regional Development of the Russian Federation I welcome you to the 8th Conference of the Organisation for Economic Co-operation and Development (OECD) to Russia, and the city of Krasnoyarsk.

A wide range of issues concerning the international community meets the goals and objectives of both the OECD and the Russian Government, including seamless integration into the global economic space, sustainable economic growth, supporting innovation on the regional level, providing employment and improving standards of living.

It is the first time the OECD has been offered ground here in Russia, for holding a constructive dialogue and developing rational models for structuring regional economies, increasing their competitiveness, encouraging innovation and improving financial support to the regions in countries all over the world.

The conference also marks the kick-off of work by the OECD on a Territorial Review of the Krasnoyarsk Agglomeration, the first such review conducted by the OECD in Russia. The review will cover general aspects of the Krasnoyarsk agglomeration’s socio-economic development and evaluate various issues affecting territorial economic development itself and also support of the business community in the area and employment rate.

The experience and the knowledge gained at the conference within the framework of its meetings and discussions with leading world experts and the OECD committee's representatives will help us overcome the problems of socio-economic development of cities and regions in Russia.

I would like to express my sincerest wishes of fruitful work, full implementation of the plans and success to all of the participants of the Conference!

Oleg Govorun
Minister of Regional Development of the Russian Federation
Dear participants of the conference,

Krasnoyarsk is honoured to greet the participants of the 8th OECD World Forum!

The Krasnoyarsk Krai is one of the largest territories in Russia. Stretching from the north to the south for 3 000 km and passing through several climate zones, it covers one-seventh of the total area of our country.

The theme of the conference agenda implies a discussion of a wide range of issues of social and economic development of rural areas, influential representatives of the international community, competent expert opinions. The conference is absolutely essential for preparing integrated solutions to be applied in the further development of industrial, scientific and cultural potential of the territory. It is essential for better integration of the Krasnoyarsk Krai into the global community.

We are open to new ideas, technologies, approaches and views of the development of various types of natural and human capital. In recent years our territory has formed a strong scientific and educational foundation for its sustainable competitive development.

I am absolutely certain that the forum and its results will allow all the participants to share the necessary experience, which can be used as a solution to various humanitarian and industrial tasks.

I hope that the hospitality of Krasnoyarsk citizens, the beauty of Siberian nature and an atmosphere of fruitful dialogue will become a good occasion to meet again in the geographical centre of Russia, in the Krasnoyarsk Krai.

Lev Kuznetsov
The Governor of the Krasnoyarsk Krai
**Introduction**

Rural regions’ primary sectors (agriculture, forestry, mining and fisheries) provide the foundations for economic activity. But they play a larger economic role than this and their economies are far more complex. Rural regions are an important location for manufacturing and most rural workers in OECD countries are now employed in service sectors, including: tourism, health care, education, finance and public administration. Rural areas also contribute to the quality of life of society as a whole, because they contain important public or quasi-public goods, such as clean environments, attractive landscapes and cultural heritage. To accommodate the changing circumstances of rural dwellers, firms and places, the approach to rural development in OECD countries can be best described as “modernising” and “adapting”. Rural policy has had to evolve beyond the traditional, sector-based model, with its almost exclusive focus on agriculture. Today rural development policies are embracing more strategies that have a spatial context, that give priority to investments over subsidies, and that encourage a partnership-based, multi-stakeholder policy design and implementation framework.

The framework that is emerging from this shift is often referred to in OECD countries as the “New Rural Paradigm” (NRP) and the early ebb and flow of these changes was set out in a 2006 OECD publication with the same title. At its core, the NRP represents an approach to rural policy that is grounded in current rural conditions and opportunities in rural areas. Recent analysis of national policy frameworks to promote rural development, through the prism of the NRP, reinforce these trends, notably the increase in multi-sectoral, place-based strategies that identify and better exploit the development potential of rural areas. Yet while the paradigm itself may no longer be new, more than half a decade since it was formulated, it remains highly relevant, as governments have often been faster to pick up the language of the NRP than the practice. Thus, the challenge of completing the transition in rural policy remains.

### New Rural Paradigm

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It is widely believed that the future prosperity of rural regions will be driven by enterprise, innovation, and new technologies, tailored to markets and applied to new and old industries (2006 Edinburgh Conference). The economic crisis that erupted in 2008 presented a moment to reflect on this, specifically to tease out the approaches with the best potential to enhance future rural development. The discussion began with the 2009 OECD Rural Development Policy Forum in Québec, Canada *Developing Rural Policies to Meet the Needs of a Changing World*. It continued in 2010 in St. Petersburg, Russia, with OECD Workshops on *Demography and Single Industry Towns* at the All Russia Regional Forum. From this conference series, two overarching premises emerged. There are four “areas of opportunity” in rural areas and four areas of “vulnerabilities”.

The “areas of opportunity” - tourism, forestry, renewable energy and local foods - are sectors well positioned to boost local economic opportunities in rural areas. Forestry policy is considered to be an integral part of rural development. Beyond providing wood products, healthy, sustainably managed forests are valuable...
tools for mitigating and combating climate change. They are also locations for important recreational activities, such as mountain biking, and can produce a variety of local foods. Wind, biodiesel, and photovoltaic technologies now represent the fastest growing energy industries. To some, renewable energy is rural energy, because virtually all renewable energy technologies are space-intensive and thus rely upon a rural location. Biofuels rely on agricultural feed stocks, wind power will be mostly rural because of siting requirements, and solar generation, though somewhat more flexible, will still be primarily rural (2006 OECD Rural Development Conference). In many OECD countries, the local food system is used as part of a regional tourism strategy where specific foods are the focus for visitors who follow a “trail” that leads them from producer to producer. This local foods thrust provides an opportunity to market a region’s food products to a global audience, as well as connecting local farmers to the communities in which they reside.

The four vulnerabilities – demographic change, climate change, declining fiscal resources and single industry towns – are not new. The 2003 OECD report *Emerging Risks of the 21st Century* singled out demography and climate change as the “driving forces” reshaping conventional hazards and creating new ones. Over the last few years, experts on rural development policy have consistently identified out-migration and ageing as key trends affecting investment decisions in rural areas, along with “changes in the rural economic structure” and the “decentralisation” process (2005, 2006, 2007, 2008 OECD Rural Development Conferences). Few policies explicitly consider the impact of climate change on rural areas, despite the fact that rural economies disproportionately specialise in the production of goods with high energy and emissions contents, as well as in activities that may depend on local climatic and other natural conditions. Rural areas are threatened by flooding, coastal erosion and limited water supply. Beyond these mega-trends, rural areas share common structural features: distance, lack of critical mass and low population density. Rural dwellers are well familiar with circumstances that require them to “make do with less”, so the resiliency of rural areas is without question (Wakeford 2008). But the recession has had far-reaching implications; in many OECD countries, central government finances deteriorated sharply and unemployment increased. Rural places were directly impacted, particularly in terms of the availability of public services. While unemployment is declining in some OECD countries and regions it remains intolerably high (OECD 2011, OECD Yearbook). The recession exacerbated existing vulnerabilities. This was particularly true in single industry towns where local economies were shattered when the dominant employer closed or shrunk its workforce.

Maximising the opportunities depends on a constellation of factors coming together. If one or two of the elements cannot be achieved, there could be continued stagnation or decline instead of transformation. In other words, no matter how much progress is made towards tapping rural opportunities, if rural vulnerabilities are not addressed, they could render any form of progress shallow. These discussions underscore the importance of exploiting future opportunities in a manner that addresses rural vulnerabilities. The 2012 Krasnoyarsk conference *Innovation and Modernising the Rural Economy* continues this discussion in a pointed way.

**Modernising the Rural Economy**

Opportunities for growth can exist in all types of regions. High and sustainable growth rates can be achieved in different ways; there is no unique recipe for success. Both high-income and lagging regions can grow faster or slower than average. Although predominantly rural regions are disproportionately represented among the slowest-growing regions in the OECD, they are also over-represented among the fastest-growing. The NRP emphasises that the most successful paths to economic development are based upon local strategies that are grounded in local

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**Areas of opportunity**

- Local foods
- Tourism
- Forestry
- Renewable energy

**Threats to Rural Areas**

- Declining local fiscal capacity
- Demographic change
- Climate change effects
- Single industry towns

**Modernising a rural economy** is the process of identifying and developing those sectors and firms which support its competitive situation relative to its neighbouring regions and to national and international peers.
competences and assets. But, it is crucial to recognise that these strategies have to be grounded in an understanding of the external environment in which the rural region is embedded.

**Strengthening Rural Markets**

Rural regions are by nature highly open to trade and must focus on competitiveness in order to grow. But for a rural region to be competitive, and hence sustainable, it has to be capable of producing goods and services that can be sold at a profit to other regions. With globalisation and shifts in terms of trade, most rural regions have to find new economic roles. This suggests that a better understanding of the economic strengths and weaknesses of rural regions is essential to improving their growth prospects. Clearly rural regions will not grow in the same way that urban regions grow. And because “first-nature geography” (climate, natural resources, soil, etc, as opposed to secondary or human geography) is more important in rural regions, it will also be the case that growth opportunities will vary considerably among rural regions, even within the same country. Some key points for consideration:

- Local supply chains are a crucial factor for regional growth. An efficient support network lowers the cost of production of the export sector enhancing its competitiveness.
- Rural regions are by definition too small to have a high rate of self-supply, because the home market is too small and must specialise in the production of a limited number of products or services to reach minimum efficient scale.
- In many cases rural areas are characterised by a lack of local competition: limited possible sources of funds, and higher costs than in urban areas.
- In single industry towns, one firm is usually the major employer and the firm may be a long distance from its nearest competitor. Distance from markets may add cost to the delivered price of its product, but distance from competitors can also preserve a spatial monopoly that shields the firm from competition.
- A better measure of longer-term economic viability is to examine growth in GDP per capita or GDP per worker. In a competitive environment expanding the number of workers is beneficial only if output per worker expands with increased employment. Unfortunately too often places where the number of jobs are expanding in unproductive firms are seen as successful, while places where jobs are declining, but productivity is increasing are seen as unsuccessful.

**Skill Building in Rural Areas**

The cost of labour is a key factor in determining competitiveness. Where workers are highly productive they can command higher wages and the ongoing viability of the firm may even allow additional employment. Increasing the skill level of the local workforce is a crucial factor in driving productivity. When capital is substituted for labour there is typically an increase in associated worker skills. Some of this requires specialised training but in general a strong basic education is the necessary foundation. Some key points for consideration:

- To achieve its potential, education systems need to be more responsive to local demand. The responsiveness of the system will be enhanced if the appropriate incentives are given. Education institutions can contribute to improving human capital formation in rural areas by: widening access to higher education; improving the relevance of provision e.g. improving the balance
between labour market supply and demand; attracting the best talent to the region; and upgrading the skills of the local population.

- Rural regions face two large skill related issues:
  
  1. The first is a fairly narrow existing skillset relative to an urban place because there are fewer people in the labour force and because rural regions typically have truncated economies with far fewer industries and consequently fewer existing skills.
  
  2. The second problem is in the cost of augmenting the local skillset. In many rural areas, there are no formal training facilities such as colleges, technical schools or other institutions where skills can be acquired. This means that those wishing to acquire skills may face significant transactions costs in identifying a place where they can receive training. Moreover, the local market for new skills is thin. Only a few individuals may be needed and only one firm may need these skills. This means that the individual worker may have limited potential to recover the cost of the training and may face a relatively low wage if too many people compete for scarce jobs.

**Balancing Diversification and Specialisation**

Entrepreneurship is now widely seen as a driving force for modernising both urban and rural economies. New firms can drive innovation and erode the monopoly profits of entrenched older businesses. In rural areas, new firms may be particularly important because they are the mechanism for introducing new sectors and products. Rural areas are particularly reliant on small and medium-sized enterprises (SMEs), since the local labour force is generally too small to supply large firms.

Because rural areas tend to specialise in a few types of business at any point in time they are especially vulnerable to shocks to their core economic base. Product cycle theory suggests that firms relocate to rural areas at a fairly late stage in their life-cycle, when controlling costs is crucial, and the market for their output is mature. Not surprisingly, such firms have a tendency to fail after a period of time, as new products are introduced. While one strategy for the host rural community is to recruit another late-stage firm, an increasingly common alternative is to try to foster indigenous entrepreneurial activity that can take advantage of local resources. Some key points for consideration:

- The process of new firm formation has to be continuous. Many new firms fail in their early stage and few of those that survive grow to employ a large number of workers, because they are unable to create a mass market.

- In rural areas, there are fewer banks and these banks may have relatively low lending limits and restrictions on the type of lending they are prepared to consider. In addition the types of investments that are common in rural areas generally do not have the potential for rapid growth that typical equity investors look for, nor do they require large enough investments to justify the high fixed costs of "due diligence" research that equity investors undertake before committing funds.

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**The 6 pillars of the OECD skills strategy:**

1. Responsiveness – ensuring that education providers can adapt to changing demand;
2. Quality and efficiency in learning provision – ensuring that the right skills are acquired at the right time, right place and in the most effective way;
3. Flexibility in provision – allowing people to study/train what they want, when they want and how they want;
4. Transferability of skills – ensuring that the skills gained at school are documented in a commonly accepted and understandable form;
5. Ease of access e.g. reducing barriers to entry;
6. Low cost of re-entry e.g. granting credits for components of learning, modular instruction, credit accumulation and transfer ease.
Innovation in the Context of Rural Areas

Understanding how innovation happens in rural areas and finding ways to foster it is central to modernising the rural economy. A region’s capacity to innovate, its resilience to shocks and the efficiency with which it delivers services all relate to the stock and quality of human capital embodied in its workforce. It is hard to imagine a region engaging in a sustained path of technological upgrading without an abundant supply of skilled labour. The typical definition of innovation relies upon investments in formal science that rely on research institutions, such as universities and national government and corporate laboratories, and success is typically measured in terms of patents. Many rural areas will always lack innovation by this standard, because they are not the home to the major research institutions or corporate headquarters that undertake and register the results of patent-producing science.

However, innovation is not restricted to new practices or behaviours; it is also about upgrading and improving the ways in which already existing things are done. The development of new opportunities requires a lot of voluntary work, creativity and local consultation; it is an interactive process involving multiple stakeholders and different sources of knowledge and information. Public investments may be needed to scale up and scale out rural innovation and to build the institutional configuration that will sustain innovation in rural areas and move it beyond pockets of success.

When a broader understanding of innovation is used, it quickly becomes clear that innovation is an important driver of development in rural areas. Regional competitiveness is driven by gains in productivity, and advances in productivity result from sustained innovative activity. However it is not always easy to identify the innovative nature of actions and initiatives in rural areas. The OECD’s new report Promoting Growth in All Regions points out that innovation also plays an essential role for rural economic development, as these regions respond to the challenges of competing in the global economy. Drabenstott and Henderson (2006) propose two key ingredients to a rural development strategy: (1) the twin forces of innovation and entrepreneurship, and (2) a critical mass of human, financial, and social capital to support evolving innovative and entrepreneurial activity. Therefore, we recognise the crucial need to encourage innovation and risk-taking in rural areas and to specify the policies that help to identify and promote these possibilities.

- Some define rural development as the process of mitigating risk (Kostov and Lingard). The traditional rural economy is highly specialised, perhaps in a single commodity, perhaps in a single manufacturing firm. Specialisation may have occurred because of natural advantage or because of economies of scale, or because the local economy was too small to allow more breadth. However as a result risk is increased, even though there may be a high current rate of return.

Innovation policy refers to a set of policy actions that promote innovative activity in order to reach societal goals. While Innovative activity refers to the creation, adaptation and adoption of new or improved products, processes and services. Innovation can take different forms:

1. Working in new ways: this might involve rural development approaches that apply new ideas, using new techniques, focusing on alternative markets, bringing diverse sectors and stakeholders together via new networking methods, supporting new priority groups, or finding new solutions to social, economic and environmental challenges.

2. Developing new products and services: these often result from testing innovative ways of working and can be created through the application of new or novel techniques, partnerships, technology, processes, research and thinking.

3. Adapting proven approaches to new circumstances: is also recognised as an effective means of creating locally significant innovative rural developments. These types of innovative actions are often facilitated by knowledge transfer between regions.
Rural Innovation Systems and Processes

Innovation is not just about new products, it also about new processes and thus about “doing old things in a new way”. Innovation in a rural context can be crucial in terms of opportunities linked with traditional activities such as farming or tourism that can be carried out in a more productive way if they adopt new or improved technologies. All the resource-based industries have exhibited high rates of innovation over time, particularly agriculture. Some points for consideration:

- There is far less effort underway in trying to understand how innovation takes place in existing firms – many of which are low-tech – and in mature industries than in searching for new firms.
- Regional innovation systems in rural contexts mean looking at new knowledge and learning processes; garnering better understanding about the interaction between producers and end users, local government and research institutes. An innovation systems perspective is helpful in analysing pathways of change, and in particular in understanding the interaction between different stakeholders, from which new ways of doing business or policy-making emerge.
- When considering the production of technology there should be a distinction between emerging and mature technologies. Urban areas may have a competitive advantage in producing emerging technologies because of thicker markets and knowledge spillovers, but rural regions can be competitive in the development of mature technologies. There are several examples of world-class innovative rural SMEs in mature technology sectors e.g. Finland and Canada.

Innovative Governance Models

Innovation is also about the way governments act and interact with other sectors players. Institutional innovation is thus a key issue in rural development. Innovative governance tools can be key drivers worth investing in for the development of rural areas. Successful regional development depends not just on policy coherence at any one moment but on creating institutions and governance arrangements that make it easier to sustain policy coherence over time. Decentralisation processes and decreasing public funds are leaving more scope and possibilities for local actors to take the initiative to manage domains traditionally covered by the public sector (health, education, population services, etc. Some key challenges to consider:

- Recognising the changing role for the top level of government: There is a need for more ordinary people to be involved, including in leadership roles and more bottom-up approaches with less orchestration from higher levels, something which is also consistent with the NRP.
- Facilitating knowledge-pooling and simplifying decision making processes: Different areas of knowledge and competence are required in making the necessary interventions. Including tacit and explicit knowledge from both “experts” and “laypersons” and from “outsiders” and “insiders” (Leeuwis 2004) engaging in an innovation feedback system.
- Engaging local communities and integrating local expectations: Across rural regions, local expectations are changing and this makes the consultative process vital to delivering services. Further investment in education and training is often more important in many rural areas. Rural development can be
triggered more effectively by investing in the local capacity ability to assimilate knowledge spillovers generated elsewhere than to actually produce that knowledge

• Recognising that there is no ‘one size fits all’ policy for rural innovation and creativity: The strengths, weaknesses, threats and opportunities all differ between rural places. A key issue for policy today is how to secure this flexibility while at the same time assuring fiscal accountability and moderate policy implementation costs.

Stimulating Rural Innovation

The “creative class” in rural contexts is not confined to the knowledge-based professions but includes, for example, farmers and other entrepreneurs engaged in transforming the wide range of rural public goods into new commercial activities (Bryden & Refsgaard 2008; Bryden et al. 2011), as well as ‘lone eagles’ or footloose entrepreneurs (Salant et al. 1996). It is also recognised that many aspects of ‘quality of life’ which cities seek to create to attract the ‘creative class’ often exist in abundance in rural contexts (Lovett & Beesley 2010; Stolarick et al. 2009).

Some key discussion points:

• Local culture, rural identity and know-how must be considered as assets. There is clearly scope for policy innovations based on the attraction and support of a wide range of creative activities including, but not confined to, the transformation of abundant public goods into quality of life for new and existing residents, rural tourism and recreation, arts and crafts, renewable energy, high quality food and wine, green care, and habitation. Such options are arguably widening and deepening as a result of changes in demography, lifestyles, raising awareness about work-life balance choices etc.

• Some rural innovations need long testing and incubation periods – the system needs to provide for this (e.g. new varieties, new cheeses etc). One question that can be raised is: “How can we enable the emergence of creative rural economies and innovation systems in a way which allows for a longer term incubation time (e.g. testing and prototyping)?” There is some work on commercialisation innovation in agriculture that addresses this question (Kulshreshtha et al. 2009; Stein & Rodriguez-Cerezo 2008).

• Although entrepreneurship is a key driver, it is often a struggle to get rural entrepreneurs to better understand entrepreneurial processes and to consider local need(s) and concerns. Rural entrepreneurship is a question of leading for change. To scale innovation, entrepreneurs need to tap into effective partnerships as well as finding partners with complementarity in products, for less seasonal-dependence and increased flexibility (Kvam & Stræte 2010).

Summary

Most rural regions in OECD countries have already moved beyond their traditional role of providing raw materials. In many rural regions manufacturing and the service industries dominate the local economy. But rural places remain different from urban places and their growth path has to reflect their particular opportunities and vulnerabilities. Because the economies of rural regions are particularly exposed to external competition, and because most rural regions face an ageing and shrinking workforce, they must focus on boosting productivity. In rural regions the key drivers of productivity will be innovation in the form of new products and processes that strengthen SMEs and improve workforce skills. Modern rural economies will be able to replicate the high rates of productivity increase exhibited in the primary industries of the OECD over the last decades in other key sectors in manufacturing and services. While the New Rural Paradigm suggests that local people will have to drive this process, there will be a key role for national, regional and rural governments in supporting this bottom-up development effort.
Rural Policy Conferences

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