



PROCEEDINGS

ENHANCING RURAL INNOVATION

11th OECD Rural Development Conference

9-12 April 2018, Edinburgh, Scotland (United Kingdom)



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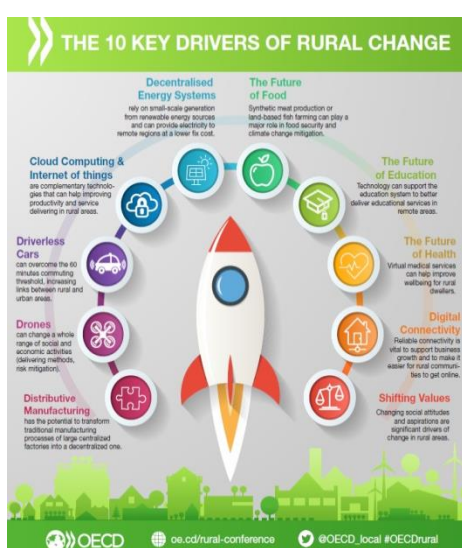
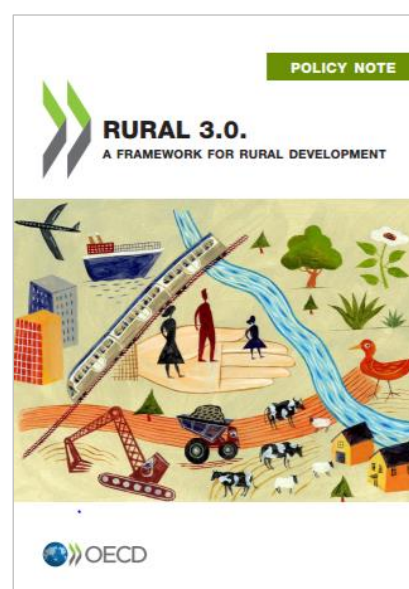
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INTRODUCTION

Inequalities remain a concern for many countries around the world. In some countries, rural communities are being left behind and most of them continue to face structural challenges. Notwithstanding this fact, rural areas have a wide range of assets and resources and a strong potential for sustainable growth. Enhancing innovation will therefore be essential to mobilise their growth potential and promote well-being for rural dwellers. This was the main focus of the 11th OECD Rural Development Conference.

The [11th OECD Rural Development Conference on Enhancing Rural Innovation](#) took place in Edinburgh, Scotland (United Kingdom) from 9-12 April 2018 and was hosted by the Scottish Government with the support of the European Commission and the United Kingdom's Department for Environment, Food and Rural Affairs. It gathered together over 400 leading policy makers, private sector and renowned experts to exchange experiences and good practices on issues related to innovation in rural areas, including the development of policies to benefit from technological change, and making the most of opportunities for job creation, economic growth, and service delivery.

The meeting was geared towards lively and direct interactions among participants, who identified relevant policies, initiatives and programmes that can support rural areas and help them benefit from technological change. Through a series of pre-conference events, exhibitor shows, an ideas factory workshop and field visits, participants had the opportunity to share ideas and directly interact with panellists.



The conference identified **10 Key drivers of Rural Change** that are likely to characterise the 21st Century and shape how rural areas can succeed in a more complex, dynamic and challenging environment. Ultimately, this conference contributed to shape a rural policy that is able to adapt to the changing conditions of this century by adopting the [Edinburgh Policy Statement on Enhancing Rural Innovation](#).

EXHIBITOR SHOW AND OPENING

Lord Provost of the City of Edinburgh welcomed the participants to the conference along with Richard Wakeford, Former Chair of OECD Working Party on Rural Policy and Enrique Garcilazo, Head of Regional and Rural Development Unit, OECD who outlined the different events and sessions of the four day conference. The welcome session stressed the importance of discussing how innovation can boost rural economy and improve well-being of rural dwellers.



PRE-CONFERENCE WORKSHOPS

The pre-conference workshops led by the European Network of Rural Development (ENRD) aimed to encourage interaction, reflection and discussion among participants around common questions, focusing on practical considerations to support the themes of the main conference. The pre-conference workshops were divided in three main themes:

- Theme 1: Rural Innovation to enhance prosperity and well-being
- Theme 2: Rural Innovation to build sustainable and resilient communities
- Theme 3: The building blocks: getting rural innovation systems, policies and governance right



The overarching outcomes of the Pre-conference's discussions were:

1. **Cooperation and collaboration** are essential. They require mutual trust as well as a culture of trust.
2. **Brokers, enablers, champions, project leaders and multipliers** are needed for multi-level, cross-sectoral projects in low-density areas
3. **Knowledge exchange and capacity building** should be facilitated across the board: from communities to policy makers and consumers
4. **Enabling infrastructures** for community level solutions must be created
5. **Soft skills matter.** They need to be valued and developed more: creativity, flexibility, adaptability, collaboration. They and can be taught (should be built into early education)
6. Territorial Identity and cultural lifestyles are important assets and catalysts
7. The digital-territorial divide must be overcome quickly
8. **Public procurement** has a role to play in market creation
9. **Good governance** is more important than money. Create an enabling infrastructure bringing together the whole community and encouraging local actors, not necessarily through more funding
10. **Performance orientation** and results-based approaches rather than ex-ante compliance auditing



DINNER RECEPTION

Fiona Hyslop, Cabinet Secretary for External Affairs of Scotland addressed the welcome remarks and stressed the importance for Scotland to host an international event focused on rural development.



Mari Kiviniemi, Deputy Secretary-General, OECD noted that innovation is a key driver of productivity, sustainable growth and well-being. It is central to every policy challenge that rural areas face. The five former Chairs of the OECD Working Party on Rural Policy described how rural policies have evolved over the past 20 years, stressing that the OECD rural program has been demonstrating, based on data and comparative evidence, how rural policy development is not just agriculture but a much broader concept that implies capitalising rural assets. They also shared the main reports and thematic work made during their period and talked about the long evolution of rural definition. Peter Wostner, current Chair of the OECD Working Party on Rural Policy highlighted the importance of perceiving rural areas as places of opportunity rather than decline. He emphasised that innovation is key to benefit from technological change and global megatrends.

HIGH-LEVEL BREAKFAST

This closed-door breakfast gathered high-level officials from host and co-host countries to refine the Edinburgh Policy Statement on Enhancing Rural Innovation before its release at the close of the conference. The breakfast was also an opportunity to share the recent development of rural policy from each of the countries represented.



CONFERENCE OPENING

At the opening plenary, Mari Kiviniemi, Deputy Secretary-General, OECD, stressed that a good rural policy should never lose sight of competitiveness and growth – neither can it afford to treat issues such as equity, environmental sustainability or well-being as second-order objectives. She noted that policies must pursue well-being in all its dimensions and put innovation at the forefront. She warned that in too many places rural potential remains unrealised and rural communities are often seen as places of economic backwardness. Such a view can reinforce a tendency to organise our thinking around urban and rural dichotomies and also contribute to a focus on “compensatory” policy approaches. She underlined that it is important for rural policies to be forward-looking and to identify future opportunities for rural business and rural communities brought by megatrends and drivers of rural change.

Fiona Hyslop, Cabinet Secretary for External Affairs of Scotland noted the importance of connecting all rural areas with fast and reliable broadband. Phil Hogan, European Commissioner for Agriculture and Rural Development emphasised the need to find smart ways to empower rural communities and Lord Duncan of Springbank, Parliamentary Under Secretary of State for Scotland and Northern Ireland claimed that innovation is needed to moderate and manage the greenhouse gas emissions from livestock and farming.

Lozana Vasileva, Deputy Minister of Bulgaria’s Agriculture, Food and Rural Development affirmed that innovation is at the heart of rural development in Bulgaria, especially with growing interest on knowledge transfer policies and introduction of new high-tech solutions in production. Yong-bok Kwon, Deputy Minister of Korea’s Ministry for Land, Infrastructure and Transport stated that Korea harnesses innovation in rural policy by incentivising smart farming and applying IT technology to transport.



Gunter Pauli, Entrepreneur and author of *The Blue Economy*, stressed in his keynote speech that innovation doesn't have to be necessarily related to technology but can also come from observation of day to day interaction and the process of business development.

Simple examples of innovation in rural areas can inspire other regions such as: i) An auto-sufficient island with simple rules such as prohibiting catching female fish to preserve sources of food, ii) an initiative that promotes the use of yeast from Patagonia and provides funding to forest conservation and iii) a project to regenerate a sea forest that produces both fertilisers and methane gas. Watch the full Keynote speech [here](#).



PILLAR 1: 10 KEY DRIVERS OF RURAL CHANGE

A number of global shifts are likely to characterise the 21st Century and shape how rural areas can succeed in a more complex, dynamic and challenging environment. Successful rural areas will be outward-looking and engaged in regional, national and international markets.

The conference looked at 10 key drivers that will shape the capacity of rural areas to address the challenges and harness the opportunities of technological change. Five key drivers are related to production and global economic integration: i) additive and distributive manufacturing; ii) drones; iii) driverless cars; iv) cloud computing and internet of things; v) deconcentrated energy systems. The other five drivers address well-being and quality of life: vi) the future of food; vii) the future of education; viii) the future of health; ix) digital connectivity; and x) shifting values and preferences.

IDEAS FACTORY WORKSHOP

The discussion on the key drivers of rural change was complemented with an interactive workshop that asked participants to brainstorm on how rural areas can respond to technological change. For each of the 10 key drivers of rural change, different breakout groups pinpointed the challenges and opportunities for a particular theme, and finally identified policy responses that could help harness the opportunities and address the challenges.

[Watch the video](#) on the Ideas Factory workshop.



Outcomes – A: The Key Drivers on production and global transformations



1. Additive and distributive manufacturing

One illustration of this is 3D printing which is being used to shape metal, polymer or even organic cells into parts. It changes traditional manufacturing as it allows for free design with no limit for complex shapes, enabling conversion from 3D to the final item without needing to develop tools to produce the part.



"This technology takes away the need to create large manufacturing with economy of scales, opening up broader possibilities for small scale localised production"
David Gonzalez, Advanced Manufacturing Department, Spain

Challenges: Limited knowledge about the possible uses and benefits of this technology, difficulty for rural areas to attract and retain experienced workers due to a general lack of professionals, economies of scale for small business. **Opportunities:** The technology makes it possible to integrate the whole value chain, 3D printing, for example, opens up the possibility to produce locally and reduce the cost of prototyping new products and tools. It ultimately may reduce dependence of remote communities by bridging supply gaps for replacement and machine parts. **Policy responses:** Enhance knowledge about the technology's possibilities, put the basic infrastructure (internet, energy) in place and update local skills.

2. Drones

It can help reduce the "tyranny of distance" in rural areas. They are already used, for example, for monitoring livestock and fields, which can be automated with intelligent systems. Areas where daily postal deliveries have been discontinued can regain services through automated drone-based deliveries. However, drones can also create competition at the local level. Delivery of products via drones makes rural areas less dependent on their local shops, threatening the local retail infrastructure.

"The technology is there, it is more a matter of making a good business case as well as the regulatory framework."

Daniel Heery, Cybermoor, UK



an increased variety of products (product delivery from different markets). **Policy responses:** Define regulation and privacy policies at the national level (ideally this should be done at the international level), invite and support pilot applications at scale, socialise projects and technology with local communities.

3. Driverless cars

While completely autonomous vehicles are still a thing of the future, assisted driving is already a reality (hands and eyes temporarily off the wheel/road). Although we can anticipate some benefits of driverless cars in terms of safety, improvements of accessibility, network capacity among others, it may require behavioural changes.

Challenges: mapping of rural areas, cultural change towards on-demand mobility, type of ownership of autonomous vehicles and job displacement (e.g. drivers), accessible technology might also increase the demand for car-based trips. **Opportunities:** Demand-led transport and service delivery (e.g. optimised routing and scheduling to hospital), greater chances of communication between people and optimisation of time (work while traveling). **Policy responses:** promote mapping of rural areas, re-think the service and usage on rural communities (drive-in cinemas, autonomous cars for rural pubs), promote the benefits of the technology among communities, planning ahead rural public transport and prepare people for the change on labour activities (from driver to maintenance/monitoring).

4. Cloud computing and the internet of things (IoT)

Low-cost modules associated with the “low power wide area” networks underpinning the IoT are radically different from traditional mobile handsets and have very different demands in terms of longevity, battery life and data transmitted.

Challenges: High cost on coverage and maintenance of broadband and sensors in rural areas, the ownership of data which – in some cases – cannot be traced back to an individual, the storage of the data as it uses huge amounts of energy. **Opportunities:** IoT can help monitor the quality of public services (e.g. water quality), predict maintenance of infrastructure and machinery, regulate energy consumption and collect data for tailored policies. Rural areas also provide the opportunity to run small scale testing **Policy responses:** A balanced approach to the ownership of data while making sure that data providers have the right to know who is using which data and how. The cost of coverage and

Challenges: There is no harmonised regulation – only national guidelines, resistance from community with regards to privacy and information ownership issues (photos, videos), increased competition for local products. **Opportunities:** Pilot projects in rural areas can generate knowledge spillovers (drones are prohibited in urban areas), learning from ongoing experiences in other areas, reduction of transportation costs and access to

“To ensure that benefits materialise transport planners need to address the low modal share of public transport in rural areas, instead of private car use, and promote active mobility and feeder systems; for instance on-demand or small-scale bus systems.”

Oliver Roeder, Institute for Transport Studies, Austria

“In agriculture, this technology allows tracking livestock throughout the whole supply chain, also the combination of weather forecasts and soil information could be used for predictive irrigation.”

Stefano Nicoletti, IoT Programme, GSMA, United Kingdom

connectivity can be solved with an aggregated demand to fund access, a public subsidy or secondary sources from large private projects in rural areas.

5. Decentralised energy systems

These systems have a variety of applications in rural areas. They can create local self-sustained energy solutions that can be supported by traditional (diesel-powered) generators or can be used to create a grid offset to guarantee 24-hour access to electricity for hospitals or data centres, for example.

“Decentralised energy systems increase resilience, ensure self-supply optimisation and possible cost minimisation.”

Stine Bundgaard Carlé, E.ON Off Grid Solutions, Germany.

Challenges: Lack of technical knowledge, awareness of opportunities (e.g. price reduction, coverage), maintenance requirements and empowering communities. **Opportunities:** Creation of new jobs in rural areas, peer learning from other communities, reduce energy prices and expand coverage. **Policy responses:** A holistic approach with shared responsibilities among regional and national government, academia and private sector. Promote renewable energy initiatives that keep the value in local communities and improve local skills (e.g. maintenance).

Outcomes – B: The Key Drivers on quality of life transformations

6. The future of food

The way we grow, perceive and consume food will very likely change. Synthetic meat production or land-based fish farming, for example, can play a major role in food security and climate change mitigation.

“We have used animals to produce food for us – but it comes at a cost. A cost we can less and less afford. Technology can make better meat substitutes from plants, insects, fungi, among others.”

Peter Verstrate, Mosameat, Netherlands.



Challenges: Limited food literacy, including effects on food waste, awareness regarding the benefits of synthetic food (e.g. meat), unequal distribution of power in the food chain. **Opportunities:** Circular production systems – increased resource efficiency, provision of healthier/novel food, increased knowledge and awareness on food-related issues. **Policy responses:** Public support for Research and Innovation and networking channels (e.g. to develop and disseminate new approaches), enable a regulatory environment to encourage re-use,

recycling, increase awareness and food literacy and taxation/ labelling for informed choice (taxes on unhealthy food e.g. sugar tax).

7. The future of education

“Thinking of different plausible possibilities is something we can do to inform our thinking and policy action. Technology blurs time and space constrains for instruction.”

Marc Fuster, Policy Analyst of Education Directorate, OECD.

Education can find support in technology to overcome some challenges in rural areas such as distance, classroom size or teacher attraction/retention. Long-distance education, for example, can be effective in terms of student-content and peer-to-peer interactions.

Also, ongoing developments in virtual and augmented reality can free up time for teachers and better support non-professional tutors.

Challenges: Strong focus on following an academic pathway as opposed to vocational education with many rural areas not providing adequate responses to this (such as course choice/variety). Furthermore, the national curriculum usually sets what is taught in schools, rather than shaping it around local needs. **Opportunities:** Digital education/learning allows teaching to be delivered in non-conventional ways, driverless buses could improve access to schools. **Policy responses:** Encourage vocational education (sharing examples of success), promote use of online courses and make use of rural assets in teaching to improve education quality for students from rural areas and attract students from urban areas. Change the curriculum involving local communities.

8. The future of health

Health relies on technology to modify the provision of healthcare and medical research. Social isolation, a lack of skilled medical staff and an ageing population are pressing challenges for rural areas. Drones delivering blood, t-shirts that monitor health or medical 3D printing is currently being used.

“Political and stakeholder dialogue is needed to enabling further use of technologies”

Ineke Malsch, Malsch TechnoValuation, Netherlands

Challenges: Social isolation (e.g. digital service provision may increase isolation), lack of skilled medical staff to manage technology, accessibility to reach health centres with technology (infrastructure still matters), population with lack of technology literacy. **Opportunities:** Digitalisation of administrative tasks to use skills wisely, Telemedicine/e-healthy will cover remote rural communities and increase social capital. **Policy responses:** Rural impact assessment and action plan, piloting delivery models (e.g. mobile service), talent attraction of health professionals (e.g. affordable housing for health professionals, make serving rural areas mandatory on education), awareness campaign in rural communities.

9. Digital connectivity

This underpins almost every aspect of modern life. Fast, reliable connectivity is vital to support business growth, help rural communities thrive and make it easier for people to get online and have access to public services. For instance, precision beef monitoring currently allows for a fully automated beef production monitoring.

“Technology will challenge, and change, how we farm – and how we manage the rural environment. One of the questions then is: do we have the right skills – workforce/policymakers – to benefit from the technology?”

Willie Thompson, Harbro, United Kingdom



Challenges: High cost of broadband infrastructure, a need to upgrade rural skills in order to make the most of the technology, the strict regulation that prevents network expansion and the long timeframe to implement broadband project. **Opportunities:** Larger digital connectivity will boost peer learning from other regions and cities, support smart rural areas and integrate services (health, education, finance etc).

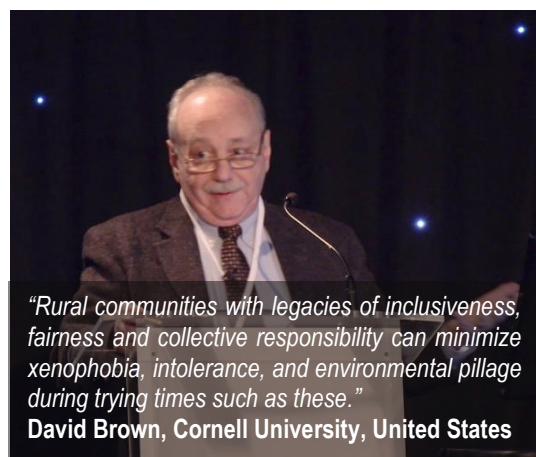
Policy responses: Enable the regulation to expand broadband by private or public sector, improve planning to implement project in a shorter time and understand the needs of stakeholders (communities, providers, businesses).

10. Shifting values and preferences

Significant drivers of change in both rural and urban areas may contribute to changes in how people live and work. Individualism, extreme nationalism, climate change scepticism and opposition to immigration are likely to be important drivers shaping lifestyle choices.

Challenges: Increasing sense of powerless, strict ideologies and radicalisation

Opportunities: Create a new narrative on collaboration, learn from successful examples, communities and rural leaders can be involved to deliver a positive message. **Policy responses:** Promote a lifelong and broad education focusing on tolerance, civic values and sense of inclusion (contrary to exclusion), maximise community and people participation in policy and promote the importance of evidence-based policy decisions (avoiding opinion-led decisions).



PILLAR 2: CREATING JOBS AND ECONOMIC OPPORTUNITY THROUGH INNOVATION

Each rural region has distinct assets and resources. The Rural Policy 3.0 supports rural areas to identify niche markets and mobilise assets and resources in areas of absolute and comparative advantage. Given the lack of economies of agglomeration, rural areas tend to specialise in tradable activities, which in turn are exported to cities or to other countries. Tradable activities and rural regions are highly exposed to international competition: to succeed they must be able to match the prices and quality of competing firms. Therefore, innovation and entrepreneurship is important to increasing productivity and enabling local diversification and value-adding





Main conclusions

- Accessing international markets, funding and finding skilled workers are recurrent challenges for rural business. However, technology can allow business to internationalise and keep up with global trends, reach out to new financial sources and find skilled people that work from home.
- Some rural businesses need high amounts of capital, particularly those relating to natural resources. While public and European Union funding are both important, joint investments from small business have also proved effective.
- Rural innovation and growth occurs through businesses combining resources and ideas for new ways of creating goods and services that are competitive in national and international markets. Rural leadership and entrepreneurship is critical to stimulate growth and can be influenced by public policy.
- Innovation does not come from isolation but it is generated from contact and exchange with other sectors and people. The remaining challenge is to improve methods to measure rural innovation.
- Creating platforms that are inclusive to SMEs and promoting work across borders can boost the innovation process in rural areas.



PILLAR 3: RURAL RESILIENCE: INNOVATIVE SOLUTIONS TO ENVIRONMENTAL AND SOCIAL CHALLENGES

While they are responsible for a lower share of GHG emissions, rural regions can still make a significant contribution to adaptation and mitigation of climate change and to encouraging sustainable development. The abundance of land and natural resources in rural areas imply that rural areas should have a fundamental role in shifting towards a low carbon economy, and rural policies should support such efforts to achieve environmental and economic sustainability.



“What do we understand to be social innovation? The reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors”

Bill Slee, Emeritus Fellow, James Hutton Institute, United Kingdom



“Inner Areas are territories characterized by a not adequate offer of/access to essential services. Participatory approach to local development is on strategy to properly define priorities of communities to be translated into new development trajectories”

Alessandra de Renzis, Tuscany Regional Government, Italy

Main conclusions

- A new paradigm for rural development has emerged – one that rejects aspatial, “topdown” industrial and sectoral development policies in favour of place-based, multi-sectoral, integrated development where communities and community-based actors have a strong role to play.
- The actions of social innovators take place in an institutional environment which can be conducive or antagonistic. The state at local, national or even transnational level has a crucial role to play.
- Whether we are dealing with tourism accommodation, renewable energy production, social care, shops or transport systems, the choice is no longer binary between public and private sectors. The third sector is a hugely creative force in rural development.



“As a cooperative of fisherman, we have faced challenges associated with demographic change, global warming, and oil exploration. It led us to change practices, be more sustainable and add greater focus on education and skills”

Phil Barnes, Fogolsland Coop, Canada



“Agriculture and forestry can play an important role in removing GHG from the atmosphere and have a potential for the rural economy and positive impacts on public goods”

Sofia Björnsson, representative of Copa and Cogeca, Sweden



Governments across the OECD are increasingly pursuing what can be described as **integrated and flexible approaches to the provision of services in rural areas** as a way of maintaining quality and access. Integration refers to the coordination of public services across a range of sectors. Flexibility in service provision refers to use alternative models to deliver public services—e.g., the use of e-health services or mobile services. These types of service delivery models can entail greater risk, involve a wider array of actors, and must navigate challenging regulatory issues

POLICY IMPLICATIONS: THE WAY FORWARD

This session provided a summary of the outputs both from the pre-conference workshops and the main conference. It conveyed the main takeaways and the policy implications from the discussions. It was also the opportunity to frame the way forward on rural policy and release the **Edinburgh Policy Statement on Enhancing Rural Innovation** shaped by delegates of the OECD Working Party on Rural Policy and subsequently endorsed by high-level attendees.



At the closing session, the Chair of the OECD Working Party on Rural Policy commended the high quality discussions at the event and underlined the importance of putting innovation in the centre of rural development policy debate. Mihail Dumitru, Deputy Director-General of DG Agriculture and Rural Development, European Commission, identified some overarching themes from the pre-conference and highlighted the importance of cooperation and collaboration, knowledge exchange, capacity building and soft skills in rural areas. Liz Ditchburn, Director-General of Economy, Scottish Government stated that ensuring digital connectivity and opportunities to interact with external markets was a key aspect to increasing rural well-being and boosting the rural economy. Joaquim Oliveira Martins, Special Advisor at the Centre for Entrepreneurship, SMEs, Regions and Cities, OECD, stressed that the performance of national economies depends on the growth of many diverse, small and intermediate rural regions. To promote growth, he confirmed the need to abandon the idea that rural polices require compensatory measures. Many rural areas face structural development challenges, but there is also a strong potential for growth, and for rural businesses to thrive. He noted that rural polices need to be much broader than just agricultural activities, and focus on mobilising the diverse specific assets of rural areas.

Other members of the panel noted a number of takeaways from the conference: i) Communities and traditional values are still an underestimated asset in rural areas, ii) Policy must come from top-down approach, towards a partnership support system that grows on their own, iii) There should be a strong focus on promoting knowledge-sharing amongst a wide range of rural stakeholders (businesses, universities, public authorities, and community organisations).

In his conclusions Peter Wostner, released the Edinburgh Policy Statement on Enhancing Rural Innovation. The Statement stresses the importance of defining rural development beyond agriculture, recognising that rural areas are places of opportunity, and adopting rural policies that leverage regional assets rather than pursuing a compensatory approach. Innovation will allow rural areas to successfully benefit from the key drivers of change identified at the conference. The Statement called for policy makers to be forward-looking and seize the opportunities brought by innovation in rural areas. The Conference welcomed the current work done at the OECD to establish Principles for a robust rural policy.



THE EDINBURGH POLICY STATEMENT ON ENHANCING RURAL INNOVATION

Rural areas are places of opportunities and are vital for inclusive growth

The 11th OECD Rural Development Conference confirmed that rural development is essential to achieve inclusive growth. The Conference also stressed the importance of defining rural development beyond agriculture; recognising that rurality is not synonymous with decline; and adopting rural policies that leverage regional assets rather than pursuing a compensatory approach.

Many rural dwellers have expressed discontent with the uneven impacts of globalisation. Low population density, remoteness, and limited diversity in economic structures all expose rural communities to external shocks. Disparities between large urban centres and the countryside remain a concern for countries across the OECD. The promise of the Sustainable Development Goals that “no one is left behind” is at stake. This needs to be acknowledged and addressed.

Countries should seek to adopt strategies to enable rural areas to take advantage of globalisation trends. Trade in food and agriculture, mining and resources, forestry and tourism have driven rural prosperity. However, with increasingly interconnected global value chains, other opportunities are emerging. OECD research has shown that manufactured goods and tradable services are strong drivers of productivity growth in rural areas. Place-based policies relying on multi-sector co-ordination and multi-level governance are necessary to unleash growth potential that is grounded in rural specific assets. The diversity of rural regions calls for the recognition of different types of rural areas, such as: *i*) rural areas inside functional urban areas; *ii*) rural areas adjacent to functional urban areas; and *iii*) remote rural areas. It also calls for supranational, national and subnational policies that better meet the unique needs and aspirations of rural dwellers and businesses.

In this context, technologies that create more deconcentrated and network-based distributive production systems have the potential to reshape the geography of economic activity. The Conference identified several key drivers of change in the 21st century: *i*) additive and distributive manufacturing; *ii*) digital connectivity; *iii*) cloud computing and the internet of things; *iv*) drones; *v*) driverless cars; *vi*) the future of education; *vii*) the future of health; *viii*) shifting values and preferences; *ix*) decentralised energy systems; and *x*) the future of food. Upgrading skills and diffusion of innovation will be paramount for rural dwellers to seize these transformative opportunities.

The Conference also underlined the central role rural areas will play in meeting the major global opportunities and challenges of the 21st century: addressing climate change through new energy sources and the circular and bio economy; guaranteeing food security and nutrition for a growing global population and reducing poverty; and sustainable provision of natural resources that will support the next production revolution.

Rural areas have specific structural challenges to address

Rural communities across the OECD experience a challenging combination of population decline and ageing. Maintaining the quality and scope of public services, creating economic opportunities, raising productivity levels and labour market participation, will be essential to maintain quality of life and attractiveness of rural areas both for people and for businesses.

Rural areas are on the front line of climate change impacts and unpredictable weather. They need to modernise their agricultural and other primary sectors and better integrate food and biomass production. Building a resilient rural economy requires sustainable management of natural resources and the preservation of public goods, such as biodiversity and landscape.

Innovation will be critical for the future competitiveness and sustainability of rural economies.

Innovation will allow rural areas to successfully benefit from the key drivers of change identified at the Conference. Improving connectivity between cities and rural regions will deliver mutual benefits. Investment, including in infrastructure, continues to be important if these benefits are to be sustained. The spread of high-speed internet connects rural dwellers and businesses to new markets, provides educational opportunities, increases social connections and changes the ways that land is managed and services can be delivered. Innovation can also help with efforts to mitigate and adapt to the impacts of climate change. Digital connectivity and new technologies will enable the collection and use of data that increases productivity and the delivery of better public services. Wide-ranging collaboration and partnership among public, private, not-for-profit and educational organisations will also be important for rural innovation.

OECD Rural Policy 3.0 calls for an integrated package of policies

Rural policy should mobilise assets and empower communities in order to enhance the social, economic and environmental well-being of rural areas. Without this focus, rural policies risk recourse to subsidies for lagging regions, which can in the long run, lead to unsustainable dependencies. In this context the Conference confirmed that a robust rural policy should:

- Place well-being at the forefront of rural policy objectives across its multiple dimensions: social, environmental and economic.
- Take a place-based view of rural development that considers the different conditions and needs of communities depending on their geographies/linkages and their local specific assets, such as a “natural capital”. “Place” should also be considered for those policies that are not inherently place-based. Taking a place-based approach implies:
 - Implementing an integrated approach that maximises complementarities across policy sectors ensuring that policies enhance one another. Replacing top-down prescriptive approaches by result-oriented policies with room for local experimentation to favour policy synergies.
 - Designing and implementing policies with a long-term perspective and promoting coherence between rural, sectoral, regional and national policy objectives, through collaboration across levels of government and with the public and private sectors.
- Develop rural-urban linkages to improve regional performance, achieve effective public service delivery and improve quality of life for residents.
- Promote societal approaches based on social innovation with a proactive role for local communities contributing to climate change adaptation and mitigation while ensuring sustainability in rural areas.
- Empower communities to better understand and address the conditions and challenges they face in order to support community-led efforts.
- Incorporate the effect of demographic trends in rural areas on the design of public services, the functioning of rural labour markets, and commuting and migration patterns.

Overall, the Conference calls for policy makers to be forward looking and seize the opportunities brought by innovation in rural areas. It recognises the value of further strengthening OECD comparable data on rural areas, particularly to better capture different types of rural areas and across the three dimensions of wellbeing. The OECD will continue taking stock of best practices and build on a comparative evidence to support the implementation of rural development policies across the OECD and beyond. Finally, the Conference welcomes the current work done at the OECD to establish Principles for a robust rural policy.



Photos courtesy of Alan Robertson and Nick Oliver.