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## **ECONOMIC COMMISSION FOR EUROPE**

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### **Team of Specialists on Innovation and Competitiveness Policies**

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### **Findings and recommendations of the Innovation for Sustainable Development Review of Belarus**

Conference room paper submitted by the secretariat

#### **Summary**

The objective of this paper is to report on the status of the Innovation for Sustainable Development Review of Belarus. It provides the background of the existing programme of national Innovation Performance Reviews, explains how this programme is being re-positioned to be able to contribute to the 2030 Agenda for Sustainable Development, summarizes the status of the Innovation for Sustainable Development Review of Belarus project, and presents a summary of its recommendations.

#### **Background**

- In 2010, Belarus became the first country to undertake a UNECE Innovation Performance Review. These reviews are country-led participatory policy advisory activities, in which a team of international experts assess the country's national innovation system, its policies and performance against international good practice and makes policy recommendations for further improvements on this basis. Following an international peer review and the publication of the final review, UNECE works with the country to provide policy advice and capacity building to facilitate the

implementation of selected policy recommendations. After Belarus, Kazakhstan, Ukraine, Armenia and Tajikistan also undertook such reviews.

- In 2015, five years after its first review, Belarus requested a second review to assess progress and to make additional policy recommendations.

## **Innovation for Sustainable Development**

- Also in 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, which puts an emphasis on innovation as a goal in itself and as a tool for facilitating the achievement of many of the other goals contained in the agenda. The 2030 Agenda also creates a new emphasis on follow-up and review to monitor and facilitate progress with implementation. This follow-up and review process is envisaged to have a regional dimension, and it is to build on existing activities in order to avoid creating excessive new reporting requirements for countries.
- As part of this effort, UNECE is embarking on a process of re-positioning its national innovation performance reviews as Innovation for Sustainable Development Reviews by adding a focus on the role which innovation policy can play in advancing national sustainable development priorities. Belarus has now become the first country to pilot this new approach.

## **Status of the Project**

- The preparatory and fact finding missions for the project have taken place in close cooperation with the national project focal point, the Belarus Institute for Systems Analysis under the State Committee for Science and Technology. The UNECE secretariat expresses its appreciation for the excellent cooperation during the project. The Innovation for Sustainable Development Review will contain chapters on recent economic developments, on new developments in policy frameworks, programs and initiatives, on the measurement of innovation performance in Belarus, on innovation in the enterprise sector, and on innovation for sustainable development. A national seminar was held in Minsk, Belarus, on 6 October 2016 that discussed the preliminary findings of the report and validated its recommendations. A summary of the

recommendations is included in this document. The full report will be finalized for publication in early 2017 and will subsequently be launched in Belarus.

## **Findings of the Innovation for Sustainable Development Review of Belarus**

- Belarus continues to make good progress towards establishing a modern National Innovation System. The authorities in Belarus consistently assign high priority to the role of innovation for socioeconomic development and progress in the country. In the period 2010-2015, important legislative and regulatory efforts were undertaken, addressing different aspects of National Innovation System development and innovation governance and filling earlier existing gaps. Many of the essential building blocks for a National Innovation System are already in place, especially as regards the role of the public sector. The portfolio of policy instruments supporting innovation activity was enriched with new ones, specifically tailored to the specificity of early stage financing. The public bodies in the National Innovation System have well defined functional responsibilities and roles in innovation governance.
- Belarus has an excellent record of openness and transparency as regards the documents reflecting public sector rules and regulations. All public bodies, including those dealing with innovation policy and its implementation, have very well organised websites which provide easy access to all relevant documents. The enriching of the information content of the websites of the State Committee on Science and Technology and the Belarus Institute for Systems Analysis, and the launching of the National Science and Technology Portal made an important contribution towards better informing innovation practitioners and entrepreneurs of the opportunities to implement and pursue their projects.
- Some improvements in the statistics of innovation in accordance with the recommendations of the first review have occurred, which draw on the Oslo and Frascati manuals, including indicators consistent with the EU Innovation Scoreboard and regular innovation surveys at the firm level.
- In addition, the information brokerage functions performed by the State Committee on Science and Technology (such as support to research and development and technology oriented forums, exhibitions, fairs, etc.) facilitate linkages and match-making between innovation stakeholders thus contributing to the generation of new

business opportunities targeting innovation. An important and commendable recent initiative by the State Committee on Science and Technology and the Belarus Innovation Fund is the organisation of annual national competitions for innovative projects which target young innovators. These competitions promote awareness raising on innovative entrepreneurship among young people while the winners are awarded small grants to support their further work on the projects.

- The R&D funding system has also been reformed with the aim to balance commercial and scientific goals, to improve commercialization of public R&D, to support intramural R&D and to improve the overall framework for innovation financing. The framework puts emphasis on both direct and indirect instruments for the support of innovation activities.
- Among these changes, an initiative to centralize innovation funds to be managed by the State Committee through a merger at the national level of 25 sector funds managed by ministries will allow to better align innovation funding to national priorities.
- Since the time of the first review, there has been a successful growth and performance of selected innovative companies (both private and state-owned). Also, a significant and impressive growth in the activities of the High Tech Park in Minsk occurred, with several technology-based enterprises showing impressive growth on international markets. A modern business incubator at the High Tech Park was set-up, with modern innovation support services (including pre-incubation, hackathons, and matchmaking in early stages of fund-raising). The success of this park has led the authorities to use it as a model to establish a second similar Park in biotechnology at the National Academy of Sciences.
- At the same time, there is still significant scope for possible improvements in the functioning of the National Innovation System, in the practices of innovation policy design and implementation as well as in innovation governance.
- There is often a mismatch between, on the one hand, policy objectives and declared intentions and, on the other hand, policy practice and the actual ability of policy practitioners to pursue these objectives with the available policy instruments and available finance. Bridging such gaps requires further development and upgrading of

the National Innovation System and enhancement of the portfolio of policy instruments with supplementary policy tools.

- One area of innovative activity that falls under this category is innovative entrepreneurship and the support to innovative SMEs and the related issue of early stage financing. All programmatic and policy documents do stress the need – and the declared intention – to support innovative entrepreneurs and small and medium-sized enterprises including start-ups. At the same time, in practice only a negligible fraction of the public funding earmarked for support to research and development and innovation activity backs this specific policy objective.
- Another underdeveloped area in the National Innovation System is that of its internal connectivity and the effectiveness of linkages which are also related to the issue of the competitive market environment. Best international practice suggests that some policy instruments can be specifically designed or amended to address such systemic failures, for example, by making the funding of a project conditional on attributes such as connectivity, linkages, stakeholder collaboration. Furthermore, the promotion of connectivity, linkages and stakeholder collaboration should not be limited to domestic stakeholders. Like most countries, Belarus lacks the size and scale to successfully develop innovative activities on a purely national level so it is important for policy to support both local and international linkages and cooperation in all stages of the innovation process including commercialization.
- Moreover, the promotion of R&D and innovation activities in the business sector and the creation of incentives for other stakeholders to engage in innovation activities remains a major challenge for the Belarusian innovation system.
- Furthermore, cross-border technology transfer activities as well as foreign direct investments and related learning effects leave room for improvement. The concept of infrastructure investments particular in the shape of techno-parks, incubator and technology transfer networks needs to be further developed and reconsidered in terms of structures and the financial models.
- As regards innovation for sustainable development, the National Strategy for Sustainable Socioeconomic Development 2016-2030 foresees the promotion of science and innovation in order to introduce green technologies and move towards a green economy.

- In recent years, grassroots social innovation activity has emerged in the form of crowdsourcing initiatives and “green” innovation contests, including with the assistance of international partners such as UNDP. One clear national sustainable development priority where innovation will be critical is energy efficiency.
- Although Belarus shows lower rates of energy intensity than other countries with economies in transition, particularly among CIS, the level is still higher than in the average European OECD economies. Also, the fact that Belarus is a net importer of fuel energy makes the transition to renewable energy more appealing. Indeed, the authorities have signalled improvements in this sector as a priority for science and technology development.
- In consequence, R&D programmes have been developed with funding from the national budget during recent years to support innovation in energy efficiency, including new technologies for energy conservation. There has also been an impulse to involve private sector stakeholders in this endeavour. Some support in the form of tax benefits, finance and grants has already been extended to individual firms performing research in bio-fuel production and energy conservation technologies.
- However, some of the challenges affecting the NIS referred to above have prevented a more rapid development of the sector. These include a bias against the commercialization of research results in state funded projects and overall limited venture finance. In addition, some aspects of the regulation in the energy sector also act as a disincentive to the further development of innovations. These include an over-regulated electricity market with significant price distortions that are the result of heavily subsidized tariffs for electricity and heat; and a lack of awareness in the general population about green products that could increase demand and create more economies of scales for innovative products.
- The UNECE Innovation for Sustainable Development Review of Belarus provides specific policy recommendations on how to address specific challenges to the Belarusian National Innovation System, including the following:

*Policy frameworks, programming and initiatives*

- ✓ Ensure conceptual consistency in the typology of innovation policy targets and align these targets with matching policy instruments.

- ✓ Initiate a gradual transition from predominantly vertical to predominantly horizontal policy mechanisms and instruments in the innovation policy mix.
- ✓ Ensure a better match between the strategic objectives of innovative development and the available policy instruments and public funding to pursue such objectives.
- ✓ Streamline innovation governance with a view to rationalizing public sector decision making related to innovation policy implementation.
- ✓ The Government should initiate measures for the further development and strengthening of the NIS and the enhancement of weak components.
- ✓ The Government should set up a system of measures to strengthen innovation-related competition and spur bottom-up entrepreneurial initiatives.
- ✓ The system of R&D and innovation funding has been conceptually improved since the first Innovation Performance Review. However, most financial mechanisms are not yet fully implemented.
- ✓ The Development Bank has recently been founded as a measure to bolster the financial/banking sector in Belarus and to provide complementary innovation and SME related financing products. It is recommended that innovation related loans, particularly regarding the financing of SMEs and start-ups, be intensified.
- ✓ To improve both the innovation potential inherent to foreign direct inflows and cross-border technology transfer, it is recommended to follow “good practice” examples with a view to a successful participation of Belarusian companies in global value chains as well as regarding the establishment of strategic partnerships with foreign technology oriented companies.

#### *Measuring innovation performance*

- ✓ The National Statistical Committee should work towards fully adopting best international standards in the collection of innovation statistics as reflected in Eurostat's CIS Harmonised survey questionnaire as practiced by Eurostat and the EU member states. In conducting this work, it should take into account the expert advice of the UNESCO Institute for statistics on the proposals of the SCST on the improvement of statistical reporting forms "1-NT innovation.
- ✓ Training of statisticians is crucial to improve the quality of data and indicators. The National Statistical Committee should consider seeking technical cooperation support in introducing good practice, including through training activities with UNECE Statistical Division, Eurostat, OECD and/or UNESCO statistical office as well as with the participation of international experts with knowledge of CIS economies.

- ✓ Consider extending the training activities beyond the National Statistical Committee to include also surveyed organisations and potential users to understand better the logic of innovation survey and its indicators.
- ✓ The National Statistical Committee should consider widening the scope and coverage of the innovation surveys in line with international best practice.
- ✓ At the time of designing national strategies and programmes there is no need for Government bodies to target individual specific indicators with the aim to improve the overall ranking on a specific international index. It should rather be done with the aim to understand better issues and challenges. Indicators should inform policy, but only rarely they should become policy target.

#### *Innovation in the enterprise sector*

- ✓ Risk sharing: Public resources have a distinguished role to encourage innovation through taking on the risky costs. Beyond the public sector some other actors may play a role in funding RDI such as venture capitalists or business angels. Because in Belarus and the latter actors are in practice missing, the state has to create better conditions for financing risky RDI activities and start-ups.
- ✓ State aid and incentives: State financial support has to be provided on a larger scale to approach better the critical mass of financial resources for RDI. Adequate financial support from the State was hampered by the recent crisis and a tight budgetary policy, but it will be necessary in the long term to ensure development objectives.
- ✓ Improve labour and skills development policies. An adequately educated and trained skilled labour-force is crucial for an innovative economy.

#### *Role of innovation policy in fostering eco-innovation*

- ✓ Enhance R&D capacities on green technologies. In line with the recommendations to increase government spending on R&D, the SCST should also target this spending in green and eco-innovation projects. In particular, research on energy efficient technologies should be encouraged by competitive allocation of resources.
- ✓ Seek engagement on international initiatives. Additional financing could be obtained from international climate funds. Also, SCST and NAS should further stimulate cooperation between national and foreign R&D institutes.
- ✓ Further deepen awareness campaigns. Relevant agencies should build on existing initiatives with UNDP to further improve education about climate change and the sustainable development goals in education institutions and to address the general public.

- ✓ Stimulate demand for eco-innovation: Green public procurement mechanisms have been considered and could be further developed with the goal to disseminate green products and eco-innovation. In the long run, public procurement processes should be simplified in order to enable SMEs to compete for state contracts on a level playing field.
  - ✓ Introduce modern energy-efficiency and fuel-efficiency standards as well as building codes and infrastructure resilience parameters in order to improve sustainability. Move towards the cost-reflective pricing of energy and water services with adequate social protection for the poor in order to enhance incentives for the adoption of progressive adaptation technologies and sustainable use of natural resources.
  - ✓ Improve policies for the generation of knowledge, absorptive capacity of the economy, the diffusion of innovation and demand for innovation. Given the complexity of eco-innovation, there is a need for better and more efficient policy coordination both in design and implementation in this area, including capacity building. Also, the authorities should consider introducing specific mechanisms and instruments that encourage and facilitate linkages among stakeholders, For instance, the creation of “green” technology business incubators and technology transfer agencies could be considered that will promote stronger linkages between FDI firms and local subcontractors.
  - ✓ Enhance financial instruments supporting eco-innovation. Firstly, consider introducing grant schemes to support R&D on eco-innovation; Establish project-based eco-innovation financing instruments that encourage the development of industry-science cooperation and inter-firm linkages including by promoting climate-resilient infrastructure through public-private partnerships.
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