



Experts provide Moldova with recommendations to make the research sector more stable

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POLICY SUPPORT FACILITY (PSF) COUNTRY

Equipping Moldova's research and innovation system with ambition for transformation

Moldova has long-standing traditions in research and education. But after the country's independence from the Soviet Union in 1991, the difficult economic and social situation led to tough cuts and low levels of investment in the sector. As a result, Moldova's research and education system is facing difficulties like limited resources (both financial and human), outdated infrastructure and low involvement of businesses. However, with the right support, Moldova's rich traditions in education and research can not only be revived but also strengthened.

Committed to improving Moldova's research and innovation (R&I) system, the Ministry of Education, Culture and Research requested a Country Review through the PSF in March 2020. This was the country's second PSF exercise (the first one was completed in 2016), and it aimed to support the government with:

- reviewing the funding system for public research;
- setting up a comprehensive policy for the development and effective use of public R&I infrastructures; and
- developing measures to strengthen the links between research and business.

Between June 2021 and December 2022, a panel of independent experts and peer reviewers drew on national and international sources, including the 2016 PSF report. They also consulted with over 60 actors from policy, research and higher education as well as business organisations. As a result, the panel made recommendations for the three areas of interest above. With the recommendations from this PSF exercise, the Moldovan government aims to improve its 2024–2027 R&I programme and its 2023–2027 strategic priorities for R&I activities.

What are the panel's main findings?

The expert panel found that the transformation of the Moldovan R&I system is slowed down by several overarching challenges. One of them is the **fragmentation of the research system**, which creates a divide between basic and applied research and development. Another challenge is the **dispersion of research equipment** and **poor links with the private sector**. The experts also noted that the **boundaries between decision-making and executive powers are blurred**. The R&I system was also reported to be **burdened by layers of rules, regulations and laws**. And lastly, the panel found that the country's **research, innovation, and economic priorities are not aligned**.

In addition, the experts highlighted specific challenges linked to the three topics of this PSF exercise.

Firstly, **there is not enough funding** to maintain the research activity needed to support higher education and meet Moldova's economic needs. In fact, over the past few years, institutional funding of research organisations has decreased to a point where it can no longer cover their basic needs.

Research and Innovation Another set of challenges relates to research infrastructures. The Moldovan government has the ambition to link national infrastructures with international ones. But to achieve this, **the country needs a clear strategic view** aligning these infrastructures with national research and economic priorities. The panel also highlighted that Moldova's research infrastructures need not just sufficient funding, but also a **culture of openness in sharing research equipment and facilities**.

Lastly, bringing together private and public research organisations is crucial for understanding the benefits of science-business cooperation for stakeholders, society and the economy. For that, Moldova needs a clear strategic (political) **commitment to science-business cooperation**. This priority does not appear to be high on the agendas of the government, universities, research institutes or businesses. The panel has also identified the **following areas for improvement**:

- insufficient critical mass in research;
- low commercialisation capacity of public research organisations;
- low absorption capacity of businesses;
- · lack of awareness and links between research and business actors; and
- insufficient supporting mechanisms.

Acknowledging these challenges, Professor Adrian Curaj, Chair of the PSF panel, noted:

'Moldova now has the opportunity to benefit from the national political alignment and two integrated PSF support initiatives. This is encouraging, as it is the best ground for decisions (recommended in the policy messages) that are essential to the R&I system reform.'

Three policy messages and 14 recommendations to make Moldova's R&I system more stable

The panel put forward three policy messages to the Moldovan government, emphasising the need for long-term political commitment to address the current challenges. As the first priority, the experts noted that the government needs to **strengthen its commitment to transforming the R&I system**, recognising the value of R&I for the economy and society. The government should boost trust in the system by embedding R&I in its long-term development and steadily increase public funding for research. The second policy message is that the government should **ensure a sufficient level of stability and predictability in the R&I system**. To do this, it needs to address the essential policy aspects of research funding, such as the R&I legal framework and incentive systems for stimulating cooperation between science and business. Lastly, it is crucial to **continue the sustainable and steady transformation** of the governance of the R&I system. This is important for addressing the system's fragmentation and for ensuring coherence and transparency at all levels.

To help the Moldovan government deliver on these policy messages, the panel put forward 14 recommendations:

- The experts called for Moldova to **increase the levels of investment in research and development**. This is an absolute necessity and a precondition for a range of positive effects on the country's research capacity. The panel warned that if the government fails to increase the level of research funding and does not strengthen its commitment to sustained investment over time, its other reforms are unlikely to have a positive effect on R&I.
- The Moldovan R&I system needs to become more stable while preserving a level of variety in research funding. For this to happen, the **selective institutional block-grant funding should be separated from competitive project-based funding**.
- The panel encouraged Moldova to **give the National Agency for Research and Development more autonomy** in organising and managing research funding. They also called for the agency's capacity to be strengthened.
- A key recommendation is to **develop a national research infrastructure roadmap**. This would require categorising research infrastructures based on their scope and degree of international presence and engagement. It would also be important to identify national pockets of scientific excellence and links to the national Smart Specialisation Strategy. And lastly, the roadmap would require identifying ambitions associated with existing European research infrastructures.
- The panel recommended to prepare a **long-term financial framework for research infrastructures**. The aim of the framework is to allocate and guarantee funds for setting up, upgrading, maintaining and operating research infrastructures.

- The **procedures for buying research infrastructure equipment** need to become simpler and more flexible. In relation to that, it is also necessary to review and adjust public procurement and funding absorption rules.
- Another key recommendation is to **consolidate research infrastructures within and between institutions** where possible. This would lead to a more efficient use of research infrastructure funds and resources and would create core facilities.
- The panel also recommended to raise awareness of available research infrastructures and their services and to make them
 visible online.
- Universities and research institutes should receive support to develop a framework for access to equipment and facilities.
 This includes access to services, as well as developing scientific and technical personnel for research infrastructure services.
- The experts highlighted the importance of promoting the value of science-business cooperation through role models and collaboration champions. They also recommended adopting a common framework for supporting longer-term collaborations and wider range of activities.
- Another important recommendation is to set up a strategic committee comprising business, scientific and government
 organisations. The committee should be able to set priorities and guidelines, promote collaborations, engage actors, and agree
 on actions. In addition, public funding for cooperation should be increased and private investments should be encouraged,
 all while prioritising key collaboration areas.
- The panel also called for bigger focus on **incentivising early-stage research partnerships** through co-funding. Researchers and businesspeople should also be better trained in science-based innovation.
- Another recommendation is to identify and facilitate potential science-business relationships by mapping and assessing the Moldovan ecosystem. In relation to that, there should be dedicated times and spaces for effective interactions between the two sectors. It is also important to design and co-fund projects to initiate and test these relationships.
- And finally, to help science-business relationships thrive, intermediaries should receive training and support with their networking. To achieve this, the panel recommends setting up incentives for research and business stakeholders, and creating and disseminating pathways for different types of cooperation.

Over the years, Moldova has been facing challenges in its R&I system. Seeing the need for a reform, in 2016 the Moldovan government took the first step on that path by seeking support from the PSF. Six years later, the analysis of the 2022 PSF exercise suggests that the country's journey to transformation continues. However, as the Panel Chair concluded, 'By a true collective effort and consistent with past and present endeavours, Moldovan authorities are now equipped with a new, crisp view on the core structural challenges and on the essential set of policy ingredients for boosting the meaningful transformation of the national R&I system.'

For further information:

<u>Final report: With ambition for transformation: Revisiting research funding, research infrastructures and science-</u> <u>industry links in the Republic of Moldova</u>

The webpage of the Country Review of the Moldovan research and innovation system

The PSF's objective is to help Member States / Associated Countries to 'improve the design, implementation and evaluation of R&I policies'. The PSF provides expertise and practical support to Member States in three major ways: PSF Country (formerly PSF Peer Reviews & Specific support to countries); PSF Challenge (including the PSF Mutual Learning Exercises, focused on specific and operational R&I challenges of interest in several volunteering countries); and PSF Open (which allows countries that have already benefited from a PSF exercise to receive support to follow up on PSF recommendations). The PSF is funded under Horizon Europe.