

Introduction

The precariousness of research careers has been an issue of increasing concern and policy attention in recent years. Academic research has changed significantly over the last decade, introducing new approaches and technologies. The future of scientific research and its ability to deliver the new knowledge and solutions needed to address pressing societal challenges depends on scientists and their motivation to do science. Tomorrow's science depends on the early-stage researchers (ECR) - PhD students and postdoctoral researchers - entering the system today. For many of these highly qualified individuals, the future does not look so attractive. The Baltic States, as small countries, can ensure their economic competitiveness and the well-being of their people through high-level scientific achievements leading to new technologies. The international meeting of stakeholders “From Challenges to Solutions: Addressing Systemic Issues for Early Career Researchers in the Baltic States” held 27 of November in Vilnius aimed to draw the attention of stakeholders to the challenges of ECR meet in the Baltic States research organizations and **to discuss the steps to be taken to improve situation on a systemic level.** During the discussions the participants of this meeting **developed the following recommendations to improve the situation of ECR in the Baltic States:**

Recommendations to the Baltic States stakeholders

To Science Policy makers, organizations regulating and financing scientific Activities (Parliament Committees for Education and Science, National Research Councils, and National Ministries of Education and Science):

1. **Recognize the Development of Future Scientific Potential as National Priority**
The development of early-stage researchers (ECRs) and their contribution to scientific progress must be declared a national priority. This will ensure that future scientific potential is not only nurtured but also aligned with the broader national goals for innovation and economic competitiveness.
2. **Create and Implement a National Strategy for Development of Future Scientific Potential.** Develop a comprehensive national strategies setting of policy options to improve working conditions where ECRs can thrive, stay engaged, and contribute meaningfully to scientific progress and professional development. The strategy should also address the challenges of securing sufficient and constant funding for fundamental research.
3. **Establish Clear and Transparent Career Development Pathways for ECRs**
Introduce policies that promote mentorship programs, clear career development guidelines, and transparent evaluation criteria for ECRs. These measures will help

ECRs navigate their professional trajectories and contribute more effectively to research outcomes.

4. **Rebalance Funding Mechanisms for Fundamental Research and Innovative Start-ups**

Decrease funding for uncompetitive start-ups that do not perform R&D activities nor create workplaces for young researchers. Instead of funding companies without competition, increase funding for fundamental research and ensure that ECRs can access to competitive research grants and opportunities for independent research. Adequate funding is essential for fostering an environment where ECRs can pursue innovative and impactful scientific work, leading to innovative start-ups in the future.

5. **Ensure specialties and competencies needed to address contemporary scientific challenges.**

Implement targeted mobility schemes that ensure third-cycle students and early-career researchers gain the needed specialties and competencies.

6. **Promote ECR Participation in Decision-Making Processes**

Actively involve ECRs in decision-making bodies and advisory committees at various levels. Their inclusion will provide valuable insights into the challenges they face, while allowing them to contribute to shaping the policies and practices that impact their careers and the broader research landscape.

7. **Address Work-Life Balance and Mental Health Support**

Implement policies that support work-life balance for ECRs, recognizing the high levels of stress and the risk of burnout. Policies should include flexible working hours, mental health support services, and clear guidelines on workload expectations.

8. **Address for importance of Baltic States Collaboration** Create a platform that could unite interested organizations from the Baltic States (Lithuania, Latvia and Estonia) in order to discuss and find solutions that would improve the situation of early-career scientists in the region.

To Research Institutes and Universities:

1. **Ensure Fair and Transparent Selection Processes for ECRs**

Develop and enforce transparent selection criteria for ECRs, focusing on both the quality and impact of their work, rather than solely on publication counts. Research institutions should prioritize the long-term potential and scientific contributions of ECRs over short-term metrics.

2. **Provide Strong Mentorship and Career Support**

Establish robust mentorship programs within research institutions and universities to guide ECRs in their professional development. Institutions should create clear, accessible pathways for career growth and ensure that ECRs have the resources needed to succeed.

3. **Foster Safe and Inclusive Work Environments**
Promote a culture of respect, inclusion, and psychological safety in research settings. This includes policies to prevent harassment, bullying, and psychological pressure, ensuring that ECRs can work in a healthy, supportive environment.
4. **Promote Collaboration with Industry and Other Sectors**
Encourage collaboration between academic researchers and industry, as well as between different academic disciplines, to align scientific research with societal needs. If a balance between science and business needs is achieved, this collaboration will help bridge the gap between research and its practical application in the economy.
5. **Support Work-Life Balance Initiatives**
Implement policies that support a healthy work-life balance, such as flexible work hours and resources for managing work-related stress. Universities and research institutes should recognize the importance of well-being in fostering productive and sustainable careers for ECRs.
6. **Monitor and Address the Situation of ECRs**
Conduct regular surveys and research to monitor the situation of ECRs within research institutions and universities. This data will help identify ongoing challenges and track progress toward improving the overall environment for early-career researchers.

To ECR associations and organizations

1. **Devote more attention to the scientific and cultural development of the ECR.** Strive to see and understand the changes taking place in science more broadly and, through its representatives, seek to influence them, creating a harmonious, highly educated society of scientists, not only with the results of their research, but also with a culture that contributes to the prosperity of their country.

By implementing these Recommendations, science policymakers and research institutions have to work together to create a more supportive, sustainable, and dynamic environment for early-career researchers, ultimately benefiting the scientific community and society as a whole.