Ministru kabinets

_____ 2020 Order No.
Riga (Minutes No. . §)

On the State Research Programme for Mitigation of Consequences of Covid-19

1. In accordance with Section 13, Paragraph two, Clause 3 of the Law on Scientific Activity, as well as on the basis of the Cabinet of Ministers Regulation No. 560 of 4 September, 2018, "Procedures for the Implementation of State Research Programme Projects", to approve the state research programme for mitigation of the consequences of Covid-19 (hereinafter – the programme).

2. To designate the Ministry of Education and Science as the responsible institution and the Ministry of Health as the co-responsible institution in the implementation of the programme.

3. The total funding of the programme is up to 5,000,000 *euros,* and the implementation period is the year 2020.

4. The overarching objective of the programme is to limit the spread of the Covid-19 infectious disease and to protect the population, in order to urgently restore economic activity and socially active daily life through innovative, high-level preparedness scientific projects.

5. The objectives of the programme are to develop scientific forecasts for future action scenarios in Latvia in autumn 2020, in 2021, and in 2022, including the overcoming of new outbreaks, by implementing research in three thematic areas:

5.1. health care and public health, including new methods for the treatment and diagnosis of Covid-19, new therapies, research into the factors that determine and influence susceptibility to the infection and outbreaks, diagnosis, course and treatment of the disease, post-infection consequences, presence of the virus in the external environment and in the domestic animals of the affected household, as well as clinical, epidemiological, and public health studies;

5.2. engineering solutions, including the enhancement of safety for human, rapid detection of infectious disease, development, testing, and certification of

personal protective equipment, provision of remote services in sectors, and use of information and communication technologies (ICT) in the educational process;

5.3. the economy and well-being of society, including the resilience of the economy against epidemics and pandemics and post-crisis development opportunities, behavioural patterns of society and psychological resilience in times of crisis, and the transformation of the educational sector and its values.

6. In order to achieve the objectives of the programme, define the following tasks:

6.1. to monitor and forecast the prevalence of Covid-19 and its influencing factors in Latvia by using epidemiological information, molecular data, and modelling, in order to reduce the spread of infection, to identify in a timely manner and prevent new outbreaks, as well as increase preparedness for other similar outbreaks and the possibility of seasonal Covid-19 and to carry out comprehensive epidemiological studies to detect the presence of the SARS-CoV-2 virus in the external environment and in domestic animals affected by the SARS-CoV-2 virus, in order to understand the optimal safety measures to minimize the exposure of the environment and domestic animals to the further spread of the virus and to develop recommendations for controlling the infection, as well as to carry out research to assess the development of collective immunity;

6.2. to create a biobank of Covid-19 patients' biological material and sample-related data, to perform standardized analysis of all samples to find out biochemical, genetic, other molecular and immunological factors and to create a data processing platform available for Latvian scientists and physicians for further research and use in the treatment process;

6.3. to identify socio-demographic, clinical, biochemical, molecular, and immunological factors influencing human susceptibility to the virus, disease diagnosis, course, treatment outcome and post-infection consequences, to improve diagnostic and treatment efficacy, to develop diagnostic methods, clinical algorithms, and clinical guidelines, as well as to conduct clinical trials in collaboration with the World Health Organization (clinical trials "Solidarity");

6.4. to develop new treatments and vaccines, including the application of existing medicines for the treatment of Covid-19 and its complications, and to include translational studies;

6.5. to carry out research on public health, including on socio-psychological aspects in the population, in order to determine the possibilities for increasing the safety of the population and certain groups, the behaviour of the population in relation to the implementation of epidemiological safety measures, the necessity of changes in the health care system to ensure continuity of health care services, the development of epidemiological safety, the quick and effective public involvement and participation in reducing the spread of infection, as well as to develop recommendations and guidelines for strengthening psychological resilience, reducing the risks of deviant or self-harming behaviour, and preventing burn-out for certain groups in the pandemic and post-pandemic environment;

6.6. to evaluate the optimal technologies to be used in increasing human beings' safety during an epidemic and to develop mobility monitoring and mobile information solutions, rapid diagnostics, and treatment equipment prototypes;

6.7. to carry out research into optimal methods for the rapid detection of the spread of infections, individual and collective protective equipment and technologies for the effective destruction of the virus indoors and in the environment, providing specific scientific research recommendations on optimal individual and collective protective equipment against infection and on protective equipment in the workplace and public transportation, including testing and certification;

6.8. to carry out research and to develop and draw up solutions:

6.8.1. optimal approaches to the provision of remote services in key sectors of the economy, cyber security, big data, and the use of information and communication technologies in business in times of crisis. To provide specific recommendations on the development of state-paid telemedicine services, optimal new-format digitized workplaces, new approaches to individual and collective work, public sector work in digital format, and to develop standards for remote service provision or improve existing standards for ensuring service quality and security;

6.8.2. the use of information and communication technologies in the digital and virtual space to modernize the learning process and introduce innovations in education, as well as to provide targeted pedagogical support and learning analytics and to monitor the results of knowledge acquisition;

6.9. to carry out research and develop solutions for the resilience of the Latvian economy to the crisis caused by the pandemic, for post-crisis development opportunities, and for optimal knowledge transfer in relation to crisis-induced innovations, as well as to provide a concrete assessment of global chain perspectives and critical infrastructure and materials of Latvia;

6.10. to implement research, as well as to develop and draw up solutions:

6.10.1. conducting research on Latvian society's behavioural patterns, value transformation, social processes, and possible structural changes in crisis and post-crisis situations, including: evaluation of changes regarding household income and its sources, work-life balance, employment changes, and the role of employers in the development of remote forms of work; ensuring a safe working environment, the effectiveness and coverage of state and local government social support measures, and the impact of significant restrictions on public services (for example, health care, education, social services) on the population; the short-term and long-term psychological impact of the crisis on individuals and families in relation to the inter-generational aspect; the establishment and maintenance of primary, secondary and tertiary social contacts, the mental and physical health of individuals; as well as distance-learning and technology-enhanced learning approaches;

6.10.2. optimal approaches for the promotion of public media literacy and the prevention of misinformation, the promotion of public civic responsibility and

participation in the evaluation of strategic communication for crises caused by a pandemic, including the evaluation of the effectiveness of information channels and information support measures;

6.10.3. digital transformation of the educational sector regarding education at all levels, using artificial intelligence and augmented reality technologies and developing innovative approaches for the monitoring of learning results, instructional strategies and design for skills acquisition in digital and virtual environments, including new methods and solutions for traditional, digital, and transferable skills and the development of social competences.

7. To determine the following common (horizontal) tasks in the implementation of the programme:

7.1. to develop interdisciplinary internationally competitive scientific groups in thematic areas of the programme, which use the latest research methods and technologies in their scientific activities;

7.2. to develop collaboration between scientific groups and specialists of the relevant economic sector;

7.3. to promote inter-institutional collaboration in order to achieve the objectives of the programme;

7.4. to engage in international cooperation networks and consortia, in particular in fields related to Covid-19, if it is necessary in order to achieve the objectives of the relevant scientific project;

7.5. to cooperate with other European and global research organizations to achieve the programme's overarching objective more efficiently;

7.6. to ensure the transfer of knowledge created in the scientific project by recommending specific actions and describing their expected consequences, also expressed by numerical indicators (Key performance indicator (KPI)), in order to:

7.6.1. have a positive impact on the economy, ensure and promote the resumption and growth of economic activity in the pandemic and post-pandemic period;

7.6.2. plan an appropriate policy in the specific sector and evaluate its implementation;

7.6.3. promote the ability of society and specific target-groups to adapt to new circumstances and reduce the formation of undesirable patterns of behaviour, habits, and values that may threaten public security, structures, and democracy during the pandemic and post-pandemic periods;

7.7. to ensure proactive mutual cooperation among the implementers of scientific projects, including ensuring the availability of research and operational data to all implementers of the programme in the stages of research data processing and analysis and consultations in the process of development of recommendations and their impact assessments, as well as to create joint original scientific papers;

7.8. to use open-source software solutions and to make the developed software solutions open for further integrations within the scope of the research project;

7.9. to ensure public access to research results, by publishing results in open-access journals, as well as by depositing newly acquired research data in research data repositories;

7.10. to ensure the transfer of knowledge created in the scientific project, involving the public and promoting public understanding of the role of research in limiting the spread of infection as well as its contribution in solving issues of public importance, including the preparation of informative popular scientific articles on research, results, and public benefits.

8. To determine the following results to be achieved during the implementation of the programme:

8.1. provided an evidence-based assessment of the economic returns of the action policy recommendations and described its potential impact on the economy and society, public health, health care, entrepreneurship, employment, and education;

8.2. developed or adapted digital solutions to the user target-groups, if provided for by the objectives of the scientific project;

8.3. achieved other specific results in accordance with the objective of each programme.

9. The implementation of the programme may be extended for three months without additional funding if it is necessary for consolidation and publishing of the results of the programme and its projects.

Prime Minister A. K. Kariņš

Minister of Education and Science I. Šuplinska