Supporting UNESCO Member States in Evidencing 10 Key Priority Areas:

Documenting Implementation Measures and Indicators for Lithuania's 2017-2020 Monitoring Submission to UNESCO for the Recommendation on Science & Scientific Researchers

UNESCO Recommendation on Science & Scientific Researchers

Indicators for 10 Key Areas

Supporting UNESCO Member States Evidencing the 10 Key Priority Areas

Task Lead:

Dr Eric A. Jensen

Senior Research Fellow

ICoRSA Policy Research Unit

International Consortium of Research Staff Associations (ICoRSA)

Contributors:

Daniela Martin

Dr Eric A. Jensen

Dr Brady Wagoner

Lars Lorenz

rring.eu

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About this Document

This document is part of the International Consortium of Research Staff Associations (ICoRSA) contribution to the RRING research and innovation project (funded by the European Commission). UNESCO is a partner in the RRING project and the leader of the Work Package for which this document was produced (viz. Work Package 6).

ICoRSA (icorsa.org)

Brings expertise rooted in a global research staff perspective, with this document developed by the specialist research unit within ICoRSA with strong expertise in evaluation research methods. The specialised unit is called the ICoRSA Policy Research Unit, and it is led by Dr. Eric A. Jensen. As an umbrella organisation for researchers and research staff associations, ICoRSA conducts policy research and advocacy aimed at advancing the status and treatment of researchers globally. In this way, ICoRSA gives voice to researchers internationally on policies that affect them and their ability to make a positive difference through their work. ICoRSA is a key partner organisation in the RRING project, described below.

RRING project (rring.eu)

The Responsible Research and Innovation Networking Globally (RRING) project has been funded by the European Commission to develop an empirically-informed global perspective on responsible research and innovation (RRI), culminating in a linked up global approach to RRI. This project makes numerous contributions to the development of a global framework for socially responsible research, including directly engaging with the monitoring process for the UNESCO Recommendation on Science and Scientific Researchers, with the production of an indicator's framework and specific survey instruments and items.

Learn more about the RRING project's work relating to the UNESCO Recommendation in this LSE Impact Blog article.

Introduction

The UNESCO Recommendation on Science and Scientific Researchers (RSSR) sets out a number of globally agreed expectations for national systems of science to anticipate and address the needs for social and institutional change toward sustainable research structures and policies, practices and public engagement.

This document provides evidence for use in the country-level measurement of progress in implementing the Recommendation at the level of the general public. Here, we present results from different sources, such as the RRING global survey of researchers' attitudes, experiences and practices, the OECD International Survey of Scientific Authors, the existing high quality public science attitudes survey called the Wellcome Global Monitor, the Special Eurobarometer "Public Perceptions of Science, Research and Innovation", among others.

The RRING Indicators Framework for the UNESCO Recommendation on Science and Scientific Researchers includes five levels of measurement designed to gain complementary vantage points on the same key area. The different levels for indicators proposed in this document are as follows:[i]

1. Member State (National Reporting)

This is the traditional focus for UN statistics in general and UNESCO indicators in particular. Representatives for the Member State report objective statistics about the status of a number of variables to give a high-level picture. Here, the focus is on identifying relevant operational policy instruments that cover the dimensions of the RSSR.

Note: The indicators proposed for this level in this document can (and should) be replicated at regional government level, where appropriate (e.g., where responsibility for science and science funding have been devolved to regional level), to provide a more fine-grained picture.

2. Research Funding Organisations (RFOs)

One important way that Member States can go about implementing their commitment to the RSSR is through the lever of research funding allocations and funding-related policy instruments. The prioritisation of mission-oriented funding, strings that are attached and the criteria that are used for selection of proposals in competitive application processes can all help to align a Member State's research system with the RSSR principles.[1]

3. Research Performing Organisations (RPOs)

Clearly, the institutions that employ scientific research staff and take responsibility for conducting scientific research are central in the scientific research system and play an outsized role in how scientific researchers are treated, supported and maintained in sustainable careers. While research performing organisations often take their cues from governments and research funders to some extent, they can develop their own norms, policies and practices that either run ahead or lag behind progress in the wider research ecosystems

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[1] Note: In many cases, this will be an arms-length national government institution such as the National Science Foundation in the United States that has governmental funds that it distributes. In other cases, this distribution of scientific research funding may take place directly via government departments or ministries, through regional governments or other mechanisms.

they participate in. This means that such organisations are important to evaluate directly to understand progress at this crucial institutional level.

4. Research Staff

Individual research staff are a key player in the RSSR, whose voice should be included in assessments of progress in RSSR implementation. Here, numerous indicators are proposed for possible use by Member States to keep track of RSSR implementation from the 'bottom up' vantage point of individual researchers.

5. General public

A number of the RSSR principles have implications for public views on the role of science. It is therefore worth considering including an indicator dimension that focuses on the public aspect of the RSSR priority areas.

Ten key priority areas for monitoring

Ten priority areas have been identified as the initial focus for RSSR implementation:

1. Responsibility of science towards the United Nations' ideals of human dignity, progress, justice, peace, welfare of humankind and respect for the environment.

2. Need for science to meaningfully interact with society and vice versa.

3. Role of science in national policy and decision- making, international cooperation and development.

4. Promotion of science as a common good.

5. Inclusive and non-discriminatory work conditions and access to education and employment in science.

6. Any scientific conduct is subject to universal human rights standards.

7. Balancing the freedoms, rights and responsibilities of researchers.

8. Scientific integrity and ethical codes of conduct for science and research and their technical applications.

9. Importance of human capital for a sound and responsible science system.

10. Role of Member States in creating an enabling environment for science and research.

Data Sources

This report documents research findings for Lithuania providing evidence relevant to the different levels of the 10 Key Priority Areas for the UNESCO RSSR. This section of the report describes the sources of global survey data that have been used to provide these findings.

Data sources for Member States

Part of the information that can be found on the Member State level indicators was collected from a survey conducted by the RRING team with research policy experts operating at the Lithuanian system contributing information about policies relevant to different aspects of the key priority areas. Each time this information is used it will be boxed and referred to as "Policy measures". The responses are a mix of links to policy documents and direct quotations from policy texts.

Another source of information for the Member State level is the responses of the working group assembled by the Lithuanian Research Council to identify relevant measures that have been taken for the implementation of the RSSR indicators.

Data sources for Research Staff

RRING survey on socially responsible research/innovation

Under the leadership of our partners from ICoRSA, a global survey was launched as a part of the RRING Project. The survey was open from 1 October 2019 to 20 December 2019. Aiming to get a deeper insight into the practices and policies of Responsible Research and Innovation (RRI) across the world, this study was conducted across 20 countries of the world. Diversity was ensured across factors such as the research and development expenditures, the per capita income levels, etc. while selecting the countries under study.

The survey resulted in 2,198 responses with a completion rate of 70% or more; 539 responses with a completion rate of less than 70%. The average completion rate of the survey was 97%. Respondents on average took 33 minutes to complete the survey.

Table 1: Sample profile of the RRING survey on socially responsible research/innovation

Geographic region	Country	Sample
Northern Europe	Lithuania	150

OECD International Survey of Scientific Authors

The International Survey of Scientific Authors (ISSA) was a global online survey designed and implemented to measure the key features of the digital transformation of science. It

explored the potential impacts of digitalization based on a combination of different indicators on research impact and responses from nearly 12,000 authors across the world. The results aim to complement other available statistical evidence and indicators in order to provide insights on selected aspects of research and inform science policy. The project was an initiative of the OECD Committee for Scientific and Technological Policy carried out under the aegis of its Working Party of National Experts of Science and Technology Indicators (NESTI).

The study targeted the corresponding authors of scientific publications whose contact information is available in a large global bibliographic database. A sample of scientific authors listed as corresponding authors were invited by email to participate in an online survey conducted directly by the OECD and were asked to report on their use of a broad range of digital tools and related practices, in addition to another key demographic and career information. Responses were collected for a total of approximately 12,000 scientific authors from all over the world and across all disciplinary areas, representing to a varying extent the subset of the research population engaged in scholarly publication work, including those in the business sector.

Table 2: Sample of author's affiliation of the 2018 OECD International Survey of Scientific Authors

Geographic region	Country	Sample
Northern Europe	Lithuania	90

Data sources for the General Public

Wellcome Global Monitor (WGM) 2018

Wellcome Global Monitor is the first study of public attitudes to science and health on a global scale, conducting nationally representative surveys of people aged 15 years or older in over 140 countries. The survey covers topics such as whether people trust science, scientists and information about health, the levels of understanding and interest in science and health, the benefits of science, the compatibility of religion and science, and attitudes to vaccines. It also explores how attitudes vary by characteristics such as nationality, gender, income, and education.

The team spoke directly to over 140,000 people around the world, adapting and translating the questionnaire to the native language of each country when necessary. The survey was conducted from April 23, 2018 to January 6, 2019 with an average of 1,000 interviews per country. In the case of face-to-face interviews, the team used two different methods of conducting the survey: Computer Assisted Personal Interviewing (CAPI) and/or Paper and Pencil Interviewing (PAPI). The mode of interview is specified in the following table.

Table 3: Lithuania's sample and mode of interview of the Wellcome Global Monitor 2018 survey

Geographic region	Country	Sample	Mode of interview
Northern Europe	Lithuania	1,000	Face-to-face CAPI

Special Eurobarometer "Public Perceptions of Science, Research and Innovation"

The Standard Eurobarometer was established in 1974. The qualitative studies investigate in-depth the motivations, feelings and reactions of selected social groups towards a given subject or concept, by listening to and analysing their way of expressing themselves in discussion groups or with non-directive interviews. This special survey was carried out by TNS Opinion & Social network between 14th and 26th of June 2014 and it provides insight on which areas European citizens would like scientific research to focus on, so as to tackle issues of most concern to them. *The timing of this survey obviously proceeds the 2017-2020 monitoring period. However, it offers a useful benchmark against which to track future progress.*

The survey first looks at the respondents' own level of scientific education. It then asks which areas they would like science and innovation to prioritize over the next 15 years. Then the respondents look at whether these areas/issues can realistically be addressed both through science and technological innovation, and also through people's actions and behaviour. All interviews were conducted face-to-face in people's homes and in the appropriate national language. As far as the data capture is concerned, CAPI (Computer Assisted Personal Interview) was used in those countries where this technique was available.

Table 4: Lithuania's sample and mode of interview of the Special Eurobarometer "Public Perceptions of Science, Research and Innovation" survey

Geographic region	Country	Sample	Mode of interview
Northern Europe	Lithuania	1,013	Face-to-face, CAPI

Monitoring implementation of the UNESCO Recommendation on Science and Scientific Researchers (RSSR)

About this document:

This document is designed to assist Member States and the Working Groups to deliver expert input into the RSSR monitoring process. In particular, Member State government representatives and Working Groups are encouraged to draw on the evidence that has been covered in this document. This document is intended to be used as a resource by Member State Working Groups, so that they can prepare a comprehensive, evidence-based report on indicators relating to the RSSR.

This is a supporting document to aid the monitoring process and does not replace direct engagement with the Key Priority Areas and the RSSR more generally by Member State representatives.

1 STI and national and international objectives

> *Science is part of Member States' efforts to develop more humane, just and inclusive societies and serves to further the United Nations ideals of peace and welfare of humankind.*

The below topics refer to science in society grouped by the Key Priority Area 1

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

1. STI and national and international objectives

	(a)	(b)
1.1 Helps achieve Sustainable Development Goals	Yes/No	Yes/No
1.2 Helps achieve Gender Equality	Yes/No	Yes/No

Evidence Available for Member States

1.1 Helps achieve Sustainable Development Goals

No evidence available from existing sources.

1.2 Helps achieve Gender Equality

No evidence available from existing sources.

Evidence Available for Research Staff at Research Performing Organisations

1.1 Helps achieve Sustainable Development Goals

No evidence available from existing sources.

1.2 Helps achieve Gender Equality

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

1.1 Helps achieve Sustainable Development Goals

The following question and its answer, extracted from the surveys mentioned in the Data Sources section, assesses whether the general public recognise science's efforts to enhance more human, just, and inclusive societies.

Question #2 from the Eurobarometer 2014 Survey evaluates whether the public perceives a potential positive impact of science and technology on different areas such as the fight against climate change, the security of citizens, the availability and quality of food, the quality of housing, among others. *These results can be viewed as a benchmark from the time prior before the 2017-2020 monitoring period against which future development can be compared.*

Regarding the **fight against climate change**, **59% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 11% expressed that the impact will be negative, and 16% specified that they will have no impact at all.

Regarding the **protection of the environment, 65% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 10% expressed that the impact will be negative, and 13% specified that they will have no impact at all.

Regarding the **security of citizens, 62% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 8% expressed that the impact will be negative, and 17% specified that they will have no impact at all.

Regarding the **job creation, 63% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 9% expressed that the impact will be negative, and 16% specified that they will have no impact at all.

Regarding the **energy supply, 71% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 3% expressed that the impact will be negative, and 14% specified that they will have no impact at all.

Regarding the **health and medical care, 77% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 3% expressed that the impact will be negative, and 9% specified that they will have no impact at all.

Regarding the **protection of personal data, 62% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 13% expressed that the impact will be negative, and 12% specified that they will have no impact at all.

Regarding the **reduction of inequalities, 43% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 7% expressed that the impact will be negative, and 35% specified that they will have no impact at all.

Regarding the **adaptation of society to an ageing population, 49% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 5% expressed that the impact will be negative, and 28% specified that they will have no impact at all.

Regarding the **availability and quality of food, 57% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 14% expressed that the impact will be negative, and 16% specified that they will have no impact at all.

Regarding the **transport and transport infrastructure, 72% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 3% expressed that the impact will be negative, and 13% specified that they will have no impact at all.

Regarding the **education and skills, 74% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 2% expressed that the impact will be negative, and12% specified that they will have no impact at all.

Regarding the **quality of housing, 58% of the people indicated that science and technology will have a positive impact in this area in the next 15 years**, 2% expressed that the impact will be negative, and 24% specified that they will have no impact at all.

Figure 1: Question #2 from the Eurobarometer 2014 survey

QB2: ROTATE ITEMS 1 TO 13

QB2 **15 years from now, what impact do you think science and technological innovation will have on the following areas …?**

AREA	A positive impact	No impact	A negative impact	Don't know
1. Fight climate change	59%	16%	11%	14%
2. Protection of the environment	65%	13%	10%	12%
3. Security of citizens	62%	17%	8%	13%
4. Job creation	63%	16%	9%	12%
5. Energy supply	71%	14%	3%	12%
6. Health and medical care	77%	9%	3%	11%
7. Protection of personal data	62%	12%	13%	13%
8. Reduction of inequalities	43%	35%	7%	15%
9. Adaptation of society to an ageing population	49%	28%	5%	18%
10. Availability and quality of food	57%	16%	14%	13%
11. Transport and transport infrastructure	72%	13%	3%	12%
12. Education and skills	74%	12%	2%	12%
13. Quality of housing	58%	24%	2%	16%

1.2 Helps achieve Gender Equality

No evidence available from existing sources.

❷ STI and society

> *Member States' governments and the general public alike recognize the value and use of science and technology for tackling global challenges. Society is engaged in science and research through the identification of knowledge needs, the conduct of scientific research, and the use of results.*

The below topics refer to science in society grouped by the Key Priority Area 2

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

2. STI and Society

	(a)	(b)
2.1 Knowledge Society	Yes/No	Yes/No
2.2 Peaceful Applications of S&T	Yes/No	Yes/No
2.3 Scientific Culture	Yes/No	Yes/No

Evidence Available for Member States

2.1 Knowledge Society

The following answers were collected from a survey conducted by the RRING team with research policy experts in Lithuania contributing information about policies relevant to different aspects of the key priority areas. The interviewees were asked if they have any national policies supporting the use of science and technology to tackle global challenges. The responses of each respondent are shown and presented as segments, where only the most relevant information for this indicator was retrieved.

Policy measures

1: Nacionalinė pažangos programa (taip pat energetikos planas bei klimato kaitos planas taip pat čia galėtų tikti).[2]

1: Operational programme for the European Union funds' investments in 2014-2020[3]

1: To create environment favourable for science and research, ensuring Lithuania's appeal for top researchers and scientists; To create a world-class studies and research centre, with a view to strengthening the existing national infrastructure and mobilizing the best scientific and teaching potential. The centre would bring together study opportunities in the interdisciplinary network, providing for interdisciplinary research and development, and opening up the research infrastructure for business-science interaction.

2: To create state-of-the-art information technologies and digital infrastructure; To roll-out advanced, resource-saving and environment-friendly (mitigating climate change) technologies and products in the sectors of industry, energy and transport;

3: To establish a culture of evidence-based management, to ensure strategic management of competencies needed to improve performance, and enhance analytical capabilities. To ensure that management decisions are made on the basis of evidence-based information.[4]

1: Inovatyvumo (kūrybingumo) horizontalusis principas suvokiamas kaip inovatyvių ir veiksmingiausių veikimo būdų paieška ir taikymas, efektyvus mokslo ir verslo bendradarbiavimas, mokslinių tyrimų ir mokslo pažangos rezultatų, naujų technologijų taikymas, kūrybiškų sprendimų paieška šaliai aktualiems iššūkiams įveikti, didesnei vertei, geresnės kokybės paslaugoms ir produktams visose valstybės veiklos srityse kurti. Dalis Plano pažangos uždavinių skirti tiesiogiai spręsti sisteminėms inovacijų ekosistemos problemoms, ribojančioms inovacijomis grįstos ekonomikos kūrimą, visuomenės pažangą, aplinkos ir klimato kaitos iššūkių įveikimą. Kiti strateginiai tikslai ir pažangos

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[2] This policy is 'required to be implemented'

[3] This policy is 'required to be implemented'. Link - Attachment. Pages 39,40,41,42,43,44,45,46,47,48

[4] Suggested. Attachment. Pages 13,15,16,18

uždaviniai prisidės prie atviros, laisvos, savimi pasitikinčios ir kūrybingos visuomenės kūrimo – būtinos inovatyvumo sąlygos.

2: 1 strateginis tikslas – pereiti prie mokslo žiniomis, pažangiosiomis technologijomis, inovacijomis grįsto darnaus ekonomikos vystymosi ir didinti šalies tarptautinį konkurencingumą

3: Plėtoti mokslu grįstas studijas – skatinti aukščiausiojo lygio laisvuosius mokslinius tyrimus ir geriau naudoti laisvųjų mokslinių tyrimų potencialą, siekti prisidėti prie Lietuvai ir pasauliui aktualių iššūkių sprendimo.[5]

1: 20. Programos strateginis tikslas – MTEPI sprendimais didinti didelės pridėtinės vertės, žiniomis ir aukštos kvalifikacijos darbo jėga grįstų ekonominių veiklų įtaką šalies BVP ir struktūriniams ūkio pokyčiams. Programos strateginis tikslas jungia šiuos tikslus: 20.1. kurti inovatyvias technologijas, produktus, procesus ir (arba) metodus ir naudojant šios veiklos rezultatus atliepti globalias tendencijas ir ilgalaikius nacionalinius iššūkius; 20.2. didinti Lietuvos ūkio subjektų konkurencingumą ir galimybes įsitvirtinti globaliose rinkose – komerciškai taikyti įgyvendinant MTEPI prioritetus sukurtas žinias, taip pat žinias, sukurtas kitaip plėtojant MTEPI prioritetus ir naudojantis unikalia sąveika (sinergija), atsirandančia bendradarbiaujant mokslo ir studijų institucijoms, ūkio subjektams ir kitiems viešojo ir privataus sektorių subjektams. 21. Uždaviniai, kuriais siekiama Programos tikslų: 21.1. kurti ir rinkoje diegti naujas technologijas, produktus, procesus, metodus; 21.2. skatinti žiniomis grįsto verslo kūrimąsi, didelį potencialą turinčių įmonių plėtrą; 21.3. skatinti klasterizaciją, įsitraukimą į tarptautinius vertės kūrimo tinklus ir investicijas į MTEPI; 21.4. skatinti viešojo ir privataus sektorių bendradarbiavimą, žinių ir technologijų perdavimą, siekiant komercinti MTEPI rehttps://e-seimas.lrs.lt/portal/legalAct/lt/TAD/c1259440f7dd11eab72ddb4a109da1b5?jfwid=rivwzvpvgzultatus; 21.5. stiprinti mokslo ir studijų institucijų ir kitų viešojo ir privataus sektorių subjektų potencialą ir gebėjimus kurti ir komercinti žinias, rengti mokslo ir inovacijų vadybos specialistus.[6]

1: The country's business development will be supported by the following measures: 1.4.1. By promoting the experimental and industrial development of the most promising energy technologies and innovation incubators, green, distributed energy generation, and digital solutions in the field of energy research.

2: It is necessary to achieve that research and development in Lithuania and the resulting products acquire industrial production and become part of Lithuanian exports, thus contributing to the country's economic growth. This requires focusing on priority research directions and, at the same time, ensuring the practical use of the results of these studies and of existing and advanced competences.[7]

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[5] This policy is required to be implemented: Link. Pages 13,16,17,18,19,20,21,34,46
[6] This policy is required to be implemented: Link. Page 9
[7] Required to be implemented. Attachment. Pages 4, 45, 46, 47

1: 11.1.2.1. To promote R&D in the the field of renewable energy sources by using financial initiatives.[8]

1: In order for Lithuania to evolve from an energy technology importer into an energy technology producer and exporter, it is necessary to promote the experimental and industrial development of the most promising energy technologies as well as innovation incubators, research and pilot implementation of research results in practice. Research and development in the field of energy in Lithuania and the products developed must be integrated into industrial production and become part of Lithuanian exports, thus contributing to the economic growth of the country. Lithuania needs to identify energy research and innovation priorities at national level and focus on them to create a competitive advantage.

2: H8. Promoting research on climate change mitigation and adaptation - To expand climate change research, to ensure the research and development as well as innovation in the sphere of climate change; to attract funds from the business sector for research and development and innovation in the sphere of climate change[9]

1: A sustainable energy innovation ecosystem would contribute to improving the conditions for local producers and researchers to further develop and strengthen the country's innovative products.

2: 35. Organize targeted research that would enable the sustainable integration of the energy innovation ecosystem into the development of the country and facilitate the implementation of energy innovations in society.

3: 42. Review the legal environment for the evaluation of scientific institutions and researchers and propose changes to encourage scientific institutions and researchers to participate in the development of innovative products (technologies), solutions and joint research and partnerships with international research centers[10]

1: Lietuvos pažangos strategija „Lietuva 2030" Lietuvos piliečius kviečia kurti „modernią, veržlią, atvirą pasauliui, savo nacionalinį tapatumą puoselėjančią stiprią valstybę". Reflektuojant ir projektuojant modernios Lietuvos visuomenės raidos principus, svarbu suprasti, kokioje modernybėje esame: kokie modernėjimo procesai ir reiškiniai vyko ir vyksta Lietuvoje, kokie jų socialiniai, politiniai, ekonominiai ir kultūriniai padariniai. Programos „Modernybė Lietuvoje" tikslas – kompleksiškai ištirti modernybės, modernizacijos ir visuomenės modernėjimo, t. y. šiuolaikinės visuomenės radimosi ir kaitos, procesus Lietuvoje ir jų įtaką nacionalinei valstybei, tapatumui, kultūrinei savasčiai ir atminčiai, gauti naujų mokslo žinių ir pateikti įžvalgų, reikšmingų gilesniam šiandienos Lietuvos politinių, socialinių, kultūrinių procesų suvokimui, Lietuvos valstybės ir visuomenės darniai bei tvariai plėtrai ir europinei integracijai. Programai įgyvendinti 2017–2022 metais numatyti 2 tyrimų uždaviniai. Pagal juos vykdomi tyrimai

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[8] Required to be implemented. Attachment. Page 18
[9] Required to be implemented. Link - Attachment. Pages 47; 93;
[10] Required to be implemented. Attachment. Pages 2, 11, 12

finansuojami iš LR valstybės biudžeto asignavimų. 1 uždavinys. Atlikti fundamentinius modernybės sampratų, modernybės, modernėjimo ir modernizacijos reiškinių ir procesų Lietuvoje tyrimus, atsižvelgiant į „daugeriopų modernybių" aibę; šiuose tyrimuose taikyti teorines, lyginamąsias bei tarpdisciplinines prieigas ir inovatyvius metodus; kompleksiškai tirti kultūros modernėjimo veiksnius ir procesus, modernios kultūros pavidalus, modernaus žmogaus formavimąsi, jo kultūrinę ir meninę raišką. 2 uždavinys. Nagrinėti socialines, ekonomines ir politines modernėjimo sąlygas ir jų poveikį visuomenės ir kultūros raidai; atlikti modernios valstybės, politinės bei tautinių bendruomenių istorinius ir lyginamuosius tyrimus, atskleisti modernių politinių idėjų ir struktūrų, politinės ir pilietinės kultūros pavidalus bei jų sklaidą.[11]

1: Kompleksiniams ekonominiams ir socialiniams ligų padariniams spręsti didelę reikšmę turi ankstyva su senėjimu susijusių ligų diagnostika. Lietuvai, kurioje, Europos Sąjungos statistikos tarnybos (EUROSTAT) duomenimis, trečdalis gyventojų 2030 metais sudarys pagyvenę žmonės, strategiškai svarbu kurti, tobulinti ir klinikinėje praktikoje taikyti inovatyvius aukštosiomis technologijomis pagrįstų ankstyvos diagnostikos metodus, kurie prailgintų sveiko senėjimo, t. y. gyvenimo be ligų ir neįgalumo, trukmę. Nacionalinės mokslo programos „Sveikas senėjimas" tikslas – kompleksiškai analizuoti ir spręsti Lietuvos visuomenės sveiko senėjimo biomedicinos ir socialinės medicinos klausimus, pasitelkiant mokslo ir technologijų plėtrą, fundamentinių ir taikomųjų mokslinių tyrimų rezultatus. Programai įgyvendinti 2015–2021 metais numatyti 3 tyrimų uždaviniai. Pagal juos vykdomi tyrimai finansuojami iš LR valstybės biudžeto asignavimų. 1 uždavinys. Sukurti naujus ligų rizikos veiksnių vertinimo ir profilaktikos metodus bei technologijas, ištirti jų poveikį sveiko ir kokybiško gyvenimo trukmei. 2 uždavinys. Pasitelkus biotechnologijų, nanotechnologijų, vaizdinimo, informacines ir telekomunikacijos technologijas, sukurti ligų, trumpinančių sveiko ir kokybiško gyvenimo trukmę, ankstyvos diagnostikos ir eigos prognozavimo metodus. 3 uždavinys. Sukurti, tobulinti ir ištirti sveikatos būklių, darančių įtaką sveiko ir kokybiško gyvenimo trukmei, gydymo, ligonių reabilitacijos bei ilgalaikės stebėsenos metodus ir Lietuvos pagyvenusių žmonių socialinę atskirtį mažinančias technologijas.[12]

1: Moksliniai tyrimai apie tai, kaip ekosistemos valdymo sprendimai veikia ekosistemos atskiras funkcijas ir jų visumą, Lietuvoje buvo vykdyti fragmentiški. Nacionalinės mokslo programos „Agro-, miško ir vandens ekosistemų tvarumas" tikslas – kompleksiniais mokslo tyrimais gauti, išanalizuoti ir apibendrinti naujas mokslo žinias apie klimato kaitos ir ekosistemų išteklių naudojimo poveikį Lietuvos ekosistemoms, jų prisitaikymo prie kintančių klimato ir aplinkos sąlygų galimybes bei, gavus naujų fundamentinių ir empirinių žinių apie ekosistemų išteklių naudojimo procesų bendruosius padarinius, pasiūlyti priemones su šiais padariniais susijusioms grėsmėms išvengti ir parengti gaires ekosistemų tvarumui kontroliuoti ir atstatyti. Programai įgyvendinti 2015–2021 metais numatyti 2 tyrimų uždaviniai. Pagal juos vykdomi tyrimai finansuojami iš LR valstybės biudžeto asignavimų. 1 uždavinys. Ištirti, kaip klimato kaita ir kiti aplinkos streso veiksniai veikia agro- ir miško bei vandens ekosistemas, jų produktyvumą ir biologinę įvairovę. 2 uždavinys. Ištirti, kaip intensyvus išteklių naudojimas veikia

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[11] Required to be implemented. [Link].
[12] Required to be implemented. [Link]

agro-, miško bei vandens ekosistemas, nustatyti ilgalaikius tokio poveikio padarinius ir galimą žalą bei pasiūlyti priemonių tvarumui atstatyti.[13]

1: Nutarimas. Dėl lietuvos respublikos vyriausybės 2014 m. Balandžio 30 d. Nutarimo nr. 411 „dėl prioritetinių mokslinių tyrimų ir eksperimentinės (socialinės, kultūrinės) plėtros ir inovacijų raidos (sumanios specializacijos) krypčių ir jų prioritetų įgyvendinimo programos patvirtinimo" pakeitimo.[14]

1: 3.2. the National Research Programme (hereinafter – the Programme) – a competitive research programme approved by the Minister of Education and Science of the Republic of Lithuania which allows problems to be addressed which are relevant to the State and society and which increases the international competitiveness of Lithuanian science, with the purpose of accumulating Lithuanian scientific potential and the financial resources required to initiate research exercises in order to address the problems covered by the Programme and focus current research (including research based on international cooperation), accumulate the efforts of numerous institutions to obtain the new scientific knowledge required in order to address the problems concerned, implement the projects relevant for the development of the individual areas of the state and society, and ensure the adequate participation of Lithuanian science in the European Research Area. 3.3. proposal for the implementation of the programme measures (hereinafter – the proposal) – a document submitted to the Council by researcher groups in cooperation with Lithuanian research and studies institutions in response to a published competition. A proposal shall consist of a description of the researcher group, a description of the project, a letter of a respective research and studies institution on the undertaking to be responsible for the implementation of the project and the administration of the funds in case the funding is allocated to the project

2: 34. The programme shall be implemented through competitive funding of research by publishing public competitions.[15]

1: 3. Programos paskirtis – sutelkti Lietuvos mokslo potencialą ir finansinius išteklius, inicijuoti programoje apibrėžtoms problemoms spręsti būtinus naujus ir kryptingai sutelkti jau vykdomus (tarp jų – tarptautinio bendradarbiavimo pagrindu) mokslinius tyrimus, daugelio institucijų pastangomis gauti naujų mokslo žinių, kurių reikia šioms problemoms spręsti, valstybės ir visuomenės gyvenimo sričių raidos projektams vykdyti, Lietuvos mokslui kaip lygiaverčiam dalyvaujant Europos mokslinių tyrimų erdvėje.

2: 5. Programa įgyvendinama vykdant mokslinių tyrimų projektus, skirtus programos įgyvendinimo priemonėms vykdyti (toliau – projektas), atrinktus konkurso būdu. Paskelbus konkursą, paraiškas vykdyti programos įgyvendinimo priemones (toliau – paraiška) teikia tyrėjų grupės kartu su Lietuvos mokslo ir studijų institucijomis (toliau – mokslo ir studijų institucijos) Nacionalinių mokslo programų

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[13] Required to be implemented. Link.
[14] Required to be considered. Link
[15] Required to be implemented. Link. pages 2, 7

rengimo ir įgyvendinimo tvarkos aprašo (toliau – Aprašas) nustatyta tvarka. Paraišką sudaro tyrėjų grupės prašymas, projekto aprašymas, mokslo ir studijų institucijos raštas dėl sutikimo projektui skyrus finansavimą būti atsakingai už projekto įgyvendinimą ir lėšų administravimą.[16]

1: "Environmental impact should be assessed"[17]

1: Lithuania's Plan for the DNA of the Future Economy will be implemented from 1 July 1 2020 to 31 December 2021.

2: To innovation and research – EUR 989 million (new investment + EUR 185 million) will be allocated. New proposals included: innovation in managing PAS (public ambulance service) flows, development of individualised medicine; opening up of health data for development of innovative products and services; creation of a cluster of infectious diseases, additional funds for scientific incubators, etc.[18]

1: National Progress Pan for 2021-2030

2: Addressing the lack of highly qualified scientists and researchers, which limits the country's potential strengths, the formation of international capacity groups, the intensity of R&D activities and their quality in research and study institutions, leads to poor participation in EU and international programs, as well as to contribute to enhancing the capacity of highly qualified researchers in the business sector, which is essential for building a high-knowledge and cutting-edge economy. Develop and target high-level scientific knowledge, increase the quality of research and its impact on society and the economy - ensure better and more efficient use of research infrastructures by integrating them into international infrastructures, increase institutional involvement in international organizations, expand their networks, strengthen STI institutional framework to stimulate the demand for high-level scientific knowledge in the public sector. Strengthen the entrepreneurial, knowledge and technology transfer capacities of science and study institutions (hereinafter - MSI), which will create conditions for better MSI cooperation with business, scientific knowledge transfer and commercialization, promote transformation of existing business and creation of science-intensive business sector, value for innovation and the change in the structure of the country's economy into a high value-added economy.[19]

1: DNA PLAN FOR THE FUTURE ECONOMY[20]

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[16] Link. Page 1
[17] Required to be considered. No Link. Pages 2,4,10
[18] Required to be implemented. Link - Attachment.
[19] Required to be implemented. Link - Attachment
[20] Required to be implemented. Link - Attachment. Pages 9, 12, 13

1: National Progress Plan[21]

1: Smart specialization

2: Over the last few years Smart Specialisation has become a key instrument for place-based development in the European Union. It now represents the most comprehensive policy experience on innovation-driven development in Europe. S3 will be an important and vital part of the future EU budget cycle. Therefore, a new Lithuanian Smart Specialization Program draft for the EU structural period 2021–2027 is being prepared and coordinated with responsible authorities. It is prepared based on the the National Progress Programme 2021-2030 (the new main) strategic document under development, which will provide the main strategic framework for the national and EU funds programming, on the basis of Sustainable Development Goals.

3: More information about Smart specialization and assessment - https://strata.gov.lt/en/science-technology-and-innovation-policy/results[22]

1: The Law on Technology and Innovation

2: Institutional restructuring of the R & D & I system initiated: • 2018 the Law on Technology and Innovation was adopted; • Amendments to the Law on Science and Studies; • The clear structure of the technology and innovation system has been established where the Ministry of the Economy and Innovation is responsible for technology and innovation policy making and the Ministry of Education, Science and Sport is responsible for policy formulation in science and studies;[23]

1: the Law of the Innovation Promotion Fund

2: The Ministry of Economy and Innovation (MoEI) prepared and on 26 June 2020 the Parliament of the Republic of Lithuania adopted the Law of the Innovation Promotion Fund, which will respond positively to business because: 1. The Innovation Fund becomes a targeted, stable, long-term and business-friendly source of incentive funding for investment in innovation; 2. Understanding the strong MoEI attitude to purposefully promote innovation activities and the possibility to use the Fund's resources for the implementation of its innovative projects, businesses will be able to assess their expectations and plan their innovation activities better than the current shorter-term innovation promotion measures allow; 3. The financial instruments for the promotion of innovation implemented by the Innovation Fund will have a positive impact on the creation of new businesses and the development of SMEs because at the moment such business cannot get sufficient funding in the market for new product development projects; 4. Public investments made through the

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[21] Required to be implemented. Link - Attachment. Pages 13, 18, 19, 20, 21, 32, 43, 54
[22] Unsure. Link
[23] Required to be considered. Link

Innovation Fund will significantly increase the business's own investments in the development and introduction of new products and their sale in the domestic and foreign markets.[24]

1: The Science, Technology and Innovation Council

2: The Science, Technology and Innovation Council was launched in 2019.[25]

1: National progress plan 2021-2030[26]

1: 2021–2030 METŲ NACIONALINIS PAŽANGOS PLANAS (NATIONAL PROGRESS PLAN 2021-2030) The plan is being drafted to identify the key changes the country is aiming for over the next decade, ensuring progress in the social, economic, environmental and security fields. The plan is a central planning document for state change, which sets out 10 strategic goals for the next decade. This Plan also aims to make progress in tackling global challenges such as climate change, with science & technology identified as one of the tools to achieve such goals. Some examples include: OBJECTIVE 1. To move to sustainable economic development based on scientific knowledge, advanced technologies, innovations and increase the country's international competitiveness. This objective suggests that "STI must become an integral part of all policies" (page 16 in the document). This strategic objective promotes research and innovation, which are crucial for the shift towards high value added and circular economies, to exploit the vast opportunities offered by global markets for low-emission technologies, sustainable products and services, and to address environmental and climate change challenges (page 18 in the document). Another example is some of the objectives of Strategic Objective 6 which aims to address environmental and climate change challenges. For instance, an objective to preserve, restore and maintain biodiversity, the quality of ecosystems and their services, the distinctiveness of the landscape and ensure the sustainable use of resources requires developing research and legislative measures promoting sustainable and cohesive resources as these are beneficial for improving, strengthening and updating regulatory mechanisms (an objective is set on page 43 in the document). The importance of scientific knowledge is also emphasized in the task of closing the Ignalina Nuclear Power Plant safely: The implementation of the task requires the accumulation of unique competencies, the search for science-based and innovative solutions, ensuring technological readiness and using this potential in the future to increase the competitiveness of the energy sector and the export of services (page 43 in the document). Based on these examples, it could be said that the National Progress Plan emphasizes the importance of science and technology in addressing both domestic issues and global challenges.[27]

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[24] Required to be considered. Link
[25] Required to be considered. Link
[26] Required to be considered. Link
[27] Suggested. Link. Pages 16,18,43 and others

1: The measure "Promoting Commercialization and Transnationality of R&D Results" (EUREKA) intends to finance the implementation of market-oriented science and business R&D projects in line with the international collaborative research and development network of the Member States of the Eureka program. The measure promotes the development of innovative products based on the results of R&D from concept to pilot production (including the implementation of R&D activities with commercial potential, development of ideas, research and engineering research, experimental development, prototype building, testing and pilot production of new products). Also, the measure is designed to strengthen the ability of researchers to join the European Research Area by supporting future oriented international science and business projects.

2: EUREKA's Eurostars Programme is the first European funding and support programme to be specifically dedicated to research-performing SMEs. Eurostars stimulates them to lead international collaborative research and innovation projects. The Eurostars mission is "To support R&D-performing entrepreneurs, by funding their research activities, enabling them to compete internationally and become leaders in their sector." The EUROSTARS programme was created on the basis of EUREKA experience. It will combine the successful bottom-up approach of EUREKA with combined financial backing from both national funding instruments and the European Commission, through the Seventh Framework Programme (FP7). EUROSTARS stimulates and supports a niche market of research-performing SMEs in their innovative and often high-risk R&D projects, bringing faster European technologies to the world market. EUROSTARS programme is open for funding applications on a continuous basis, with an average of two application submission deadlines each year.

3: Academics involved in inventorship and patenting are more likely to recognise entrepreneurial opportunities. Finally, conducting joint project research in multiple fields has a positive and significant impact on R&D quality and academic excellence.

4: Innovation ecosystem is one of the most important indicators in assessing public and private sectors innovation activities progress. In recent years, our country aims to accelerate the commercialization of research results, activation of new technologies in business, placing on the market of new or significantly improved products. The paper analyzes the international competitiveness and innovation promoting programs EUREKA and EUROSTARS effects on Lithuanian innovation ecosystem. The aim of this paper is to evaluate the EUREKA and EUROSTARS programs impact on our country's innovation ecosystem. The empirical study was carried out by analyzing secondary data sources covering the period 2006- 2015. Empirical research has shown that participation in collaborative technology projects contributing to the Lithuanian innovation ecosystem improvement by increasing the openness of research, promotes cooperation and development knowledge-intensive business.[28]

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1. Engineering and Educational Technologies. Scientific journal.[29]

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[28] Required to be implemented. Link
[29] Required to be implemented. Link

1: Coordination of international programmes Horizon 2020;

2: The strategic goal of the Programme – to enhance competitiveness of the Lithuanian economy through the development of the effective innovation system promoting economic innovation, to promote the creation of value networking, development and internationalization;[30]

1: SME instrument[31]

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1. „Fast action" in research and innovation through collaboration.[32]

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1. From Horizon 2020 to Horizon Europe: "Evolution, not Revolution".[33]

1: Lithuanian Innovation Strategy for 2010-2020 (LIS). The collaboration of government, industry and universities is vital for the successful development of innovation.

2: In the LIS, the Lithuanian base of an innovative economy consists of: Innovative traditional industries (Engineering; Chemical industry; Food industry; Wood, furniture and textiles industry) High tech industries (Biotechnologies; Lasers and light technologies; ICT; Production of electrical and optical equipment) New economic sectors (Future energy; Creative technologies; Clean technologies; Wellbeing and wellness) According to the LIS, the long-term objective of innovation policy is "to build a creative society and create conditions for the development of entrepreneurship and innovation".3 This policy objective is implemented along four dimensions: 1. Enhancing the Lithuanian integration into the global market; 2. Educating a creative and innovative society; 3. Developing broad-based innovation (i.e., including non-technical innovation); 4. Implementing a systematic approach to innovation.

3: The LIS Action Plan for 2010-2013 encompasses 120 measures drafted and to be implemented by 12 (out of 14) ministries of Lithuania. The LIS is based on an assessment of the strengths and weaknesses of the research and innovation system in Lithuania. Main weaknesses that need to be addressed include: Research at universities and public research institutes is insufficiently translated into innovations; The public research sector and the business sector are insufficiently linked; State funding is mostly used for institutional base funding, only a small part is allocated in competition; The business sector has low expenditures on R&D. Therefore, Lithuanian research and innovation policy aims to strengthen the research system by enhancing human capital in science & technology (researchers), to improve the R&D infrastructure and to change the system of R&D financing (more

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[30] Link
[31] Link
[32] Link
[33] Link

competition-based). To strengthen the linkages between the public research sector and the private sector, public-private collaboration in R&D and innovation is stimulated.[34]

1: BSR[35]

1: JAPAN[36]

1: Israel[37]

1: Singapore[38]

1: 2014-2021 EEA and Norwegian Financial Mechanisms aim to reduce economic and social disparities in the European Economic Area and to strengthen bilateral relations between Iceland, Liechtenstein, Norway and 15 beneficiary countries in Central and South-Eastern Europe and the Baltic States. Lithuanian IT sector is the largest in the Baltic States as well as the most receptive to investments. The program will focus on exploiting the potential of the IT sector by investing in the development of innovative IT solutions, products and technologies that are applicable to various industrial sectors.[39]

1: National Research Programmes[40]

1: 2021–2030 METŲ NACIONALINIS PAŽANGOS PLANAS (2021 - 2030 NATIONAL PROGRESS PLAN) The plan is being drafted to identify the key changes the country is aiming for over the next decade, ensuring progress in the social, economic, environmental and security fields. The plan is a central planning document for state change, which sets out 10 strategic goals for the next decade. This Plan also aims to make progress in tackling global challenges such as climate change, with science & technology identified as one of the tools to achieve such goals. Some examples include: OBJECTIVE 1. To move to sustainable economic development based on scientific knowledge, advanced technologies, innovations and increase the country's international competitiveness. This objective suggests that "STI must become an integral part of all policies" (page 16 in the document). This

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[34] [Link](#)
[35] [Link](#)
[36] [Link](#)
[37] [Link](#)
[38] [Link](#)
[39] [Link](#)
[40] Suggested. [Link](#)

strategic objective promotes research and innovation, which are crucial for the shift towards high value added and circular economies, to exploit the vast opportunities offered by global markets for low-emission technologies, sustainable products and services, and to address environmental and climate change challenges (page 18 in the document). Another example is some of the objectives of Strategic Objective 6 which aims to address environmental and climate change challenges. For instance, an objective to preserve, restore and maintain biodiversity, the quality of ecosystems and their services, the distinctiveness of the landscape and ensure the sustainable use of resources requires developing research and legislative measures promoting sustainable and cohesive resources as these are beneficial for improving, strengthening and updating regulatory mechanisms (an objective is set on page 43 in the document). The importance of scientific knowledge is also emphasized in the task of closing the Ignalina Nuclear Power Plant safely: The implementation of the task requires the accumulation of unique competencies, the search for science-based and innovative solutions, ensuring technological readiness and using this potential in the future to increase the competitiveness of the energy sector and the export of services (page 43 in the document). Based on these examples, it could be said that the National Progress Plan emphasizes the importance of science and technology in addressing both domestic issues and global challenges.[41]

2.2 Peaceful Applications of S&T

The following answers were collected from a survey conducted by the RRING team with research policy experts in Lithuania contributing information about policies relevant to different aspects of the key priority areas. The interviewees were asked if their country has specific policies for ensuring that members of the general public are engaged through the process of conducting research (e.g., through well-designed citizen science initiatives). The responses of each respondent are shown and presented as segments, where only the most relevant information for this indicator was retrieved.

Policy measures

1: Invitation to participate in the event "Perspectives of Citizen Science in Lithuania", co-organised by Mykolas Romeris University (MRU), Kaunas University of Technology (KTU) and the Office of Ombudsperson for Academic Ethics and Procedures of the Republic of Lithuania, took place on 13 September, from 3:00 p.m. to 6:00 p.m., at Vilnius Techpark in Vilnius. A new EU research and innovation programme Horizon Europe was still under development by that time, but the importance of openness in science has already been enshrined in the initial guidelines. In this context, open science does not only mean databases and information sharing accessible to all. Openness is also sought through collaboration – expanding the audience of researchers, the methods of research organization and engaging the public in various forms. This is where the importance of application of citizen science becomes apparent. Although the engagement of citizens in research activities in the EU has been increasingly encouraged, there is limited discussion on the subject in Lithuania. The aim of the event was to present the concept of citizen science and to launch a discussion on how to open up scientific processes in Lithuania by attracting citizens to participate in open science initiatives.

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[41] This policy is 'required to be considered': Link. Pages 16, 18, 43

During the event, citizen science experts from Germany, Sweden, Belgium and Spain shared their experiences, success stories and recommendations.[42]

1: 35. Organize targeted research that would enable the sustainable integration of the energy innovation ecosystem into the development of the country and facilitate the implementation of energy innovations in society.2: 46. Carry out regular public consultations with the public to better identify consumer needs that can be addressed through innovation.[43]

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1. Lietuvos Respublikos technologijų ir inovacijų įstatymas.[44]

1: Awareness and Promotion of FinTech Innovations (FinTech LT) The aim of this project: increase a number of fintech enterprises and innovations in Lithuania. The project focuses on raising awareness of business community and entrepreneurial society about fintech innovations, and creating a sustainable image of Lithuania as fintech industry hub in the Baltic region.[45]

2.3 Scientific Culture

The Researchers' Night is a public event that brings researchers closer to the general public. The Night showcases the diversity of science and its impact on citizens' daily lives, stimulating interest in research careers - particularly among young people. In addition to this, another national event that appears within interest of young people is the science festival 'Spaceship Earth'. It raises awareness on researcher's profession in high schools and facilitates understanding on different research topics. The Museum Night, which takes place all over Europe, is a night when museums open their doors and invite guests to explore their exhibitions and participate in educational activities and other events.

The following answers were collected from a survey conducted with research policy experts in Lithuania contributing information about policies relevant to different aspects of the key priority areas (with the support of the ICoRSA Policy Research Unit under the auspices of the RRING project). The interviewees were asked if their country has a national strategy for public engagement with science. The responses of each respondent are shown and presented as segments, where only the most relevant information for this indicator was retrieved by the responding research policy experts. Where the research policy experts only provided a link, this has been provided below.

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[42] Link
[43] Attachment
[44] Link
[45] Link

Policy measures

1. Lietuvos respublikos švietimo ir mokslo ministras. Įsakymas dėl mokslo ir technologijų populiarinimo lietuvoje strategijos patvirtinimo.[46]

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1. Lietuvos respublikos švietimo ir mokslo ministras. Įsakymas dėl mokslo ir technologijų populiarinimo lietuvoje strategijos patvirtinimo.[47]

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1. European Comission. JRC technical report. Higher Education for Smart Specialisation: The case of Lithuania.[48]

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1. Lietuvos respublikos švietimo ir mokslo ministras. Įsakymas dėl mokslo ir technologijų populiarinimo lietuvoje strategijos patvirtinimo.[49]

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1. Lietuvos Respublikos mokslo ir studijų įstatymas.[50]

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1. Lietuvos Respublikos Technologijų Ir Inovacijų Įstatymas.[51]

When asked if they have a general requirement for public/societal engagement with science in their constitution, domestic legislation, policy or regulatory frameworks, the research policy experts expressed the following:

Policy measures

1: Mokslo ir studijų misija – padėti užtikrinti šalies visuomenės, kultūros ir ūkio klestėjimą, būti kiekvieno Lietuvos Respublikos piliečio visaverčio gyvenimo atrama ir paskata, tenkinti prigimtinį pažinimo troškimą. Lietuvos mokslo ir studijų politika laiduoja mokslo ir studijų kokybę, visų šalies piliečių lygias teises įgyti aukštąjį išsilavinimą ir sąlygas geriausiems dirbti mokslinį darbą, siekti mokslinio ir kūrybinio tobulėjimo, rūpinasi mokslo ir studijų sistemos atitiktimi visuomenės ir ūkio poreikiams, remia jos atvirumą ir integraciją į tarptautinę mokslinių tyrimų ir aukštojo mokslo erdvę. Darni mokslo ir studijų sistema grindžia žinių visuomenės plėtotę, žiniomis grįstos ekonomikos stiprėjimą ir darnų šalies vystymąsi, dinamišką ir konkurencingą šalies ūkio gyvenimą, socialinę ir ekonominę gerovę; ugdo kūrybingą, išsilavinusią, orią, etiškai atsakingą, pilietišką, savarankišką ir verslią asmenybę, puoselėja civilizacinę Lietuvos tapatybę, palaiko, plėtoja ir kuria šalies ir pasaulio kultūros tradicijas.2: 3 straipsnis. Mokslo ir studijų principai 1. Mokslas yra grindžiamas šiais principais:

[46] Link - Attachment
[47] Link
[48] Link - Attachment
[49] Link
[50] Link
[51] Link

1) kūrybos ir mokslinių tyrimų laisvės; 2) akademinės etikos; 3) lituanistikos prioriteto; 4) mokslinių tyrimų rezultatų viešumo; 5) integracijos į valstybės ir visuomenės gyvenimą; 6) orientavimosi į tarptautinius kokybės standartus; 7) sąžiningos konkurencijos; 8) intelektinės nuosavybės teisių užtikrinimo; 9) dalyvavimo tarptautinėje ir Europos mokslinių tyrimų erdvėje. 2. Studijos yra grindžiamos šiais principais: 1) akademinės laisvės ir autonomijos; 2) atvirumo ir atsakomybės visuomenei; 3) akademinės bendruomenės narių bendradarbiavimo; 4) studentų asmeninio suinteresuotumo; 5) įsipareigojimo ugdyti akademinės bendruomenės narių visuomeninį atsakingumą; 6) aukštųjų mokyklų ir studentų sąžiningos konkurencijos; 7) lituanistikos prioriteto; 8) Europos humanistinės ir demokratinės tradicijos; 9) suderinamumo su Europos aukštojo mokslo erdvės nuostatomis; 10) nuolatinio mokymosi siekio; 11) integracijos į valstybės ir visuomenės gyvenimą.[52]

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1. Republic of Lithuania Law on Higher Education and Research.[53]

1: Challenges, expectations, goals and possible solutions for country's progress over the coming two decades were analysed by non-governmental organizations, academia, business organizations and public institutions, experts. The preparation of the Strategy involved public at large. Various social groups were eager to join the discussion platform by bringing forward their ideas and sharing their views. The Strategy was extensively discussed across the regions, many presentations were arranged; there were idea generation centres operating across the country; a National Day of Ideas and an Open Forum "Lithuania 2030" were held.2: To develop community self-governance (through empowerment of schools and grass-root administrations), which strengthens participation of communities and non-governmental organizations in public life. National and local authorities have to deliberately seek to delegate to the public ever more powers and responsibility to act independently as regards the implementation of the subsidiarity principle.3: 6. A particular role in national progress is given to social activism, which manifests itself through self-governance and civic awareness. These elements are best reflected by the Lithuanian Society's Civic Empowerment Index11. The index reveals small but steady growth in civil empowerment over the past four years. However, it is still inadequate, and the civic capacity of the population is still low. The empowerment index of the Lithuanian society in 2010 was only 35.5 points out of 100 possible.4: 17. The rapidly changing environment and growing need for self-governance call for an adjusted model of governance, including increased openness and collaboration with citizens. Today, the government regulates a very large number of areas of public life and, therefore, the majority of the citizens are accustomed to expect that it will resolve all their problems and answer all the questions. Only 33% of the population think that there is too much government interference in their lives. This is one of the lowest indicators in the European Union, as the majority of EU citizens think that there is too much regulation by the government (average 58 per cent) 26. This must change. Along with growing civic maturity, the government must reduce areas of intervention, thus enabling citizens and communities to take responsibility into their hands. Government powers should be redistributed from public authorities to people and communities, enabling them to act together. The role of the government should shift from implementer or executor to organizer or coordinator; and public services must be delivered together with citizens, the private sector, local communities and non-governmental organizations. 19.

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The participation of local communities and non-governmental organizations in the management of public affairs is currently insufficient. There are a number of reasons for that: some communities and non-governmental organizations lack stable funding, diversity, capacities, clear mechanism for cooperation with the State, a favourable regulatory environment, and the like. For the development of independent non-governmental organizations and local communities, it is very important to enable them to act and to provide necessary conditions for achievement of their goals. Therefore, a consistent transfer of public functions to these organizations is one of the essential steps towards changes in governance. It should be noted that currently there are few municipalities, which would involve local communities or non-governmental organisations in the provision of public services; the majority of community-based organizations tend to pursue but artistic goals, leaving aside other issues of relevance.[54]

1: The government attitude towards the society engagement in policy implementation is still moderate, the national smart specialisation process being among the few positive examples.2: The university sector reform is a main step forward in public RDI capacity building and high level research production. However, it has its own risks, as the universities are increasingly driven towards international rankings and much less concerned about the community impact and local business engagement, especially at SME level.[55]

1: Lithuania joined the multilateral Open Government Partnership initiative in 2011. In 2012, 2014, 2016 and 2018, the Government Office developed action plans for improving open-government practices throughout the country. During the review period, Lithuania signed the Council of Europe Convention on Access to Official Documents (2015) and the U.N. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (2015). In 2016, the government approved three major initiatives to make public institutions more accountable to society, reduce corruption and increase transparency, while also increasing public engagement. However, implementation has been undermined by a lack of measurable targets and meaningful collaboration with civil society.[56]

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1. Lietuvos Respublikos piliečių priimta 1992 m. spalio 25 d. referendume.[57]

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1. Lietuvos Respublikos mokslo ir studijų įstatymas.[58]

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1. Lietuvos Respublikos technologijų ir inovacijų įstatymas.[59]

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[54] Link - Attachment. Pages 5, 12, 21, 24-25
[55] Link - Attachment. Pages 19, 18
[56] Attachment. Page 38
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1. Aukstojo mokslo ir studiju istatymas.[60]

1: 7. Following the publication of a call, proposals may be submitted by public administration, research and studies institutions, researchers and other natural and legal persons. Ministries and other public authorities disposing of the appropriations of the state budget of the Republic of Lithuania and other legitimate funding sources, as well as funds, research and studies institutions and business entities having at their disposal funds from the European Union structural funds and other legitimate funding sources may submit their proposals while undertaking to ensure funding for part of the themes under the Programmes. The submitted proposals shall contain: 7.1. a description of a problem of strategic importance to the state and the society the resolution of which requires interdisciplinary research according to the themes under the proposed programme, 7.2. a substantiation of the need for new scientific knowledge for addressing the problem which could be generated through the national scale research in the themes under the proposed programme carried by joint efforts of several research and studies institutions, 4 7.3. a substantiation that the problem may be resolved by efforts of Lithuanian researchers in the period of 3-7 years.[61]

1: "Socio-economic factors of research should be assessed."[62]

1: In 2014 The Agency for Science, Innovation and Technology (MITA) and NASA signed a bilateral cooperation agreement on International Internship Program (NASA I²). The agreement was signed during a visit of the Government of the Republic of Lithuania to the United States. Only 12 countries in the world (Australia, Brazil, Israel, Jordan, Mexico, Lithuania, Portugal, South Africa, South Korea, Sweden, Trinidad and Tobago and the United Arab Emirates) and European Space Agency have agreements with NASA, which opens possibilities for students to participate in summer and autumn internships.[63]

1: Since 2011, Lithuania has been a member of TAFTIE association. In 2018, Lithuania took the chairmanship for TAFTIE and an active part in the discussionson how to better implement research and innovation policies.

2: The collaboration across universities, business and local government could be seen as a major factor in the creating entrepreneurship environment. However, not all countries are equally successful which leaves open the question of how to guide the systems closer to the leader position[64]

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[61] Link. Pages 3,4
[62] Pages 2,4,10
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1. Taftie Expert Session I, 28th February 2018, Vilnius. Expert Session I: Creating ecosystems for innovative high – technology entrepreneurship: pathway to successful R&D outputs commercialization.[65]

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1. Taftie Expert Session II, 25th April 2018, Vilnius. Expert Session II: How organisational structures in science shape spin-off firms.[66]

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1. Taftie Expert Session III, Vilnius, 26th September 2018. Expert Session III. Future innovation networks: development and growth in business economy.[67]

1: https://taftie.eu/content/taftie-policy-forum-brussels-21st-november-2018[68]

1: Open Access to Science and Research

2: The aim of the project is: to stimulate open access usage of science and research institutions resources; to develop skills to identify the research needed services and to commercialize R&D outputs; to organize and develop a common Lithuanian R&D marketing strategy using the Open R&D Lithuania brand.[69]

1: Open R&D Lithuania network is a newly launched platform of cooperation between open access R&D centres / laboratories of 12 Lithuanian Universities, 13 Public Research Institutes as well as 7 Science and Technology parks. All these institutions united their high-level R&D intellectual potential, infrastructure and resources in order to provide scientifically based solutions to the problems raised by business and society.

2: Through the Open R&D Lithuania Contact Centre it facilitates cooperation of researchers and businesses from Lithuania and beyond.[70]

1: The Constitution of the Republic of Lithuania 21 Article No one may be subjected to scientific or medical experimentation without his knowledge and free consent.[71]

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The following answers were collected from a survey conducted by the RRING team with research policy experts in Lithuania contributing information about policies relevant to different aspects of the key priority areas. The interviewees were asked if their country has a national strategy to ensure that societal knowledge needs are identified. The responses of each respondent are shown and presented as segments, where only the most relevant information for this indicator was retrieved.

Policy measures

1: Strategija "Lietuva 2030"[72]

1: XVIIIth Government Programme[73]

1: Promotion of GovTech and AI in Lithuania (GovTech Lab) The purpose of the project is to boost the innovation ecosystem within the fields of GovTech and AI by increasing the number of GovTech and AI companies, encouraging organisations to integrate and use GovTech and AI solutions, focusing on raising awareness about such innovations and ensuring the accessibility of knowledge and experts for those, who aspire to create AI or GovTech products.[74]

1: Article 3 in the Law on Research and Higher Education of Lithuania states that one of the principles of science and higher education is the principle of integration into the life of the state and society[75]

When asked if Lithuania has specific policies for ensuring that accurately identified societal knowledge needs from society are used to orient research investment in their country, the research policy experts expressed the following:

Policy measures

1: Smart specialization programme[76]

1: The design of Lithuanian national Research and Innovation Smart Specialization Strategy consisted of several main steps; it took analyzes, foresight, surveys, panel discussions and other tools to explore the present and future challenges, and the means and field of addressing them. The activities were done in the framework of entrepreneurial discovery process. The process framed a bottom-up dialogue by representatives of science, business, public and the government authorities. It was a mean to mobilize various different stakeholders for a mutual goal. The process was based on constant communication and public accountability. Besides the goal for ready strategy, the process was aimed at the collective ownership of its output, thus the result. The EDP objective – defined by Foray – is not

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about telling the innovation system actors what the right specializations are, but about accompanying emerging trends and improving coordination by providing the necessary public goods and creating additional incentives at critical bottlenecks to help the new activity to grow. Therefore, the outcome of the process is a structural evolution of the whole economy (Foray, 2011). In order to figure out the challenges, identify the trend, and frame the priorities an analysis on the general background and global challenges had to be made, later verified by the stakeholders, and composed to a final roadmap. Selecting the broad priority fields Analysis For main issues and contexts were selected for analyses: (1) global trends and drivers as challenges for Lithuanian R&I policy, (2) long-term national challenges facing Lithuanian economy and society, (3) research potential in Lithuania, and (4) review of the strengths of the Lithuanian economy and the prospects of knowledge driven growth. For the global trends and drivers as challenges for Lithuanian R&I policy it was anticipated, that whenever there is a challenge or problem, market demand is likely to follow [that direction]. The anticipation was made regarding both global and domestic innovation demands and backgrounds. Therefore, the analysis was closely related to the dimension of long-term national challenges facing Lithuanian economy and society.[77]

1: Open and empowering governance: To develop mechanisms involving citizens and other stakeholders in identification of public needs, and to ensure their participation in a constructive form of dialogue at all levels of decision-making.[78]

1: Higher education institutions (HEIs) are key players in the regional/national innovation systems. They focus on three missions – education, research as well as engagement with the society and knowledge transfer. This puts HEIs in a pivotal role to connect all the elements of the 'Knowledge Triangle', which are needed for successful implementation of Smart Specialisation Strategy (S3).2: Public policies aimed at strengthening collaboration between HEIs and other actors within the R&I ecosystem rely on two logics of interventions. First, the Government initiatives and reforms carried out over the past 10 years have focused on strengthening HEIs' capacities to increase the quality of studies and research. This is based on an implicit assumption that a strong base in studies and research is an essential precondition for fruitful engagement with the broader civil society and R&I ecosystem.[79]

1: III. PRESUMPTIONS FOR LITHUANIAN STUDIES RESEARCH DEVELOPMENT: 13.2. General external presumptions are the following: clear and effective policy of humanities and social sciences and the strategic planning which expresses essential needs of society and responds to the most important scientific challenges. Decisions on the research policy and strategy shall be adopted in discussion with the academic society and in cooperation with community, by seeking wide consensus.[80]

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1: There is some kind of policy developed by the Research Council of Lithuanian which is the main research funding organisation. For example, national research programmes (https://www.lmt.lt/lt/mokslo-politika/moksliniu-tyrimu-finansavimo-instrumentai/nacionalines-mokslo-programos/260), Competitive Priorities of Research Programmes (https://www.lmt.lt/lt/mokslo-politika/moksliniu-tyrimu-finansavimo-instrumentai/konkursines-prioritetiniu-moksliniu-tyrimu-programos/3196)[81]

The following answers were collected from a survey conducted by the RRING team with research policy experts in Lithuania contributing information about policies relevant to different aspects of the key priority areas. The interviewees were asked if Lithuania has a national strategy for the communication of research results. The responses of each respondent are shown and presented as segments, where only the most relevant information for this indicator was retrieved.

Policy measures

1: RESEARCH COUNCIL OF LITHUANIA OPEN ACCESS POLICY: Research Council of Lithuania Open Access Policies are regulated by the 'Guidelines on Open Access to Scientific Publications and Data' (approved in February 2016). The main purpose of the Guidelines – present to Lithuanian academic institutions and researchers engaged in research and dissemination projects the general principles underlying Open Access to the results of publicly funded research.[82]

1: The system for the dissemination of the Lithuanian Studies research results, including the presentation of new research, resources, data, and generalisations to the Lithuanian society and the international audience which would not only strengthen cultural awareness and identity of citizens but also would increase the visibility of our country, is also necessary.2: Research which results are seen to the society and which dissemination and penetration encourage public awareness and dialogue and impacts its development; support shall be given to the dissemination of the Lithuanian Study research results and findings among the Lithuanian society.[83]

1: Integration of Lithuanian business into international value chains of Experimental Development and Innovation (InterInoLT) Aim of the project: to create a network of Lithuanian Experimental Development and Innovation Representatives ("Ambassadors") to promote the potential of Lithuanian Experimental Development and Innovation (R&D&I) abroad by: increasing funds from international R&D&I programmes; attracting investment to innovative projects and export of high value-added products and services (innovation) (to help companies move out of R&D&I sandbox in Lithuania).[84]

1: Open lectures, hackathons, innovation exhibition targeted at students, researchers and the public Open days at science valleys, institutes and universities2: To contribute to the ambitious goal for

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Lithuania, namely, to become one of the leading life sciences countries in the region by 2030, in October 2019 MITA launched the initiative called "Promotion of Life Sciences Industry Development".3: https://mita.lrv.lt/en/projects/promotion-of-life-sciences-industry-development[85]

1: The TraCS3 project overall objective is to improve regional policies in support of innovation infrastructure in S3 key priority sectors with strong innovation potential addressing the societal challenges and enhancing interregional cooperation within and between emerging and expanding innovation eco-systems.[86]

1: To explore whether the welfare sector has a sufficient potential to set up series of bilateral activities.[87]

1: The Road of Digitalisation The idea of the InnoCAPE project is to increase the capacity of Digital Innovation Hubs (DIHs) in the Baltic Sea Region, which would become the new vehicles to implement digitalisation strategies and policies designed by respective public authorities. Therefore, InnoCAPE involves 3 public authorities from Lithuania, Latvia and Estonia directly and has support from 5 public authorities in Norway, Sweden, and Finland as associated partners. They all will act together with 8 DIHs from the abovementioned countries, resulting in better knowledge on DIHs, increased capacity to develop measures for DIH sustainability, and better capacity to design and implement national digitalisation policies via DIHs as public enablers.[88]

1: The Law on Science and Higher Education. Article 3. Principles of scientific research and Higher education: 1. Science is based on the following principles: ...publicity of research results .... 2. Studies are based on the following principles: ... 2) openness and responsibility to society ..."2: The Law on Science and Higher Education. Article 51 Publicity of research results: In order to ensure the quality of state-funded research, transparency of the use of state-budget funds, and to promote scientific progress, all results of state-funded research and experimental development in research and higher education institutions must be made public (on the website and in other ways) as far as possible, that these not conflict with the protection of intellectual property, commercial and state secrets.[89]

Finally, when asked if Lithuania has a national strategy for ensuring that research results are used to benefit society, the research policy experts expressed the following:

Policy measures

1: Valstybinė studijų, mokslinių tyrimų ir eksperimentinės (socialinės, kultūrinės) plėtros 2013–2020 metų plėtros programa (toliau – Programa) parengta siekiant apibrėžti pagrindines studijų, mokslinių tyrimų ir eksperimentinės (socialinės, kultūrinės) plėtros (toliau – MTEP) kryptis, kurios skatintų darnią žmogaus ir visuomenės raidą, stiprintų šalies konkurencingumą ir atitiktų pagrindines Valstybės pažangos strategijos „Lietuvos pažangos strategija „Lietuva 2030", patvirtintos Lietuvos Respublikos

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Seimo 2012 m. gegužės 15 d. nutarimu Nr. XI-2015 (Žin., 2012, Nr. 61-3050) (toliau – Lietuvos pažangos strategija „Lietuva 2030"), 2014–2020 metų nacionalinės pažangos programos, patvirtintos Lietuvos Respublikos Vyriausybės 2012 m. lapkričio 28 d. nutarimu Nr. 1482, ir Europos Komisijos 2010 m. kovo 3 d. komunikato Nr. KOM(2010) „Pažangaus, tvaraus ir integracinio augimo strategija „Europa 2020" (toliau – strategija „Europa 2020") nuostatas.2: Antrasis Programos tikslas – kurti naujas žinias, sudaryti mokslo, verslo ir kultūros integracijos sąlygas, siekiant stiprinti šalies pranašumus.3: Mokslo ir studijų institucijų misija įpareigoja jas imtis lyderio vaidmens visuomenėje, būti atviras ir verslias, skleisti visuomenėje mokslo žinias, diegti jas kultūros, švietimo ir sveikatos apsaugos srityse, taip pat socialinėje ir ūkinėje veikloje, aktyviai prisidėti prie inovacijomis ir žiniomis grindžiamos ekonomikos kūrimo, žinioms imlios visuomenės ugdymo. Šiai aukštojo mokslo misijai ir atskaitomybės visuomenei tikslui įgyvendinti bus siekiama valstybinių aukštųjų mokyklų autonomijos ir atskaitomybės visuomenei bei kitoms suinteresuotoms šalims dermės, plėtojama šiuolaikinė institucijų valdymo, atvirumo ir bendradarbiavimo kultūra.[90]

1: The same as mentioned earlier, e.g., strategy "Lietuva 2030", XVIIIth Government programme

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1. Lietuvos Respublikos technologijų ir inovacijų įstatymas.[91]

1: Article 3 in the Law on Research and Higher Education of Lithuania states that one of the principles of science and higher education is the principle of integration into the life of the state and society[92]

Evidence Available for Research Staff at Research Performing Organisations

2.1 Knowledge Society

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assesses the researchers´ perspective on whether science and technology are being recognised as valuable to tackle global challenges, as well as their level of commitment to engage with society. This is an indicator of whether the researchers´ feel committed or are being encouraged to work with the community in order to solve societal problems.

Question #11.1 from the RRING survey assesses whether scientific researchers´ think it is important to make the results of their research and innovations work accessible to as wide a public as possible. The responses range from Strongly Disagree to Strongly Agree. **53% of the researchers strongly agree with the statement, 30% agree, 9 somewhat agree, 2% somewhat disagree, 2% disagree, 1% strongly disagree and 2% expressed feeling neutral about it.**

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Figure 2: Question #11.1 from the RRING survey on socially responsible research/innovation

Please specify your agreement with the following statement:
- It is important to make the results of my research and innovations work accessible to as wide a public as possible

Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree	N/A
1%	2%	2%	2%	9%	30%	53%	2%

Following the same line, question #11.2 and #11.3 from the RRING survey goes deeper and asks what steps have the researchers´ taken to make the results of their research accessible to the public. **64% of the researchers expressed having taken steps in the last 12 months. 8% said no and 18% were unsure.**

Figure 3: Question #11.2 from the RRING survey on socially responsible research/innovation

In the last 12 months, have you taken steps to make the results of your research and innovation work accessible to as wide a public as possible?

Yes	No	Unsure	N/A
64%	8%	18%	10%

Regarding the steps taken to make the results of their research accessible to the public by the researchers who said yes in the last question, **31% of them said making their research and innovation (R&I) results publicly accessible. 23% specified sharing their work within a professional R&I stakeholder environment, 10% said engaging with non-academic/public stakeholders through outreach activities after research is completed and 8% expressed promoting their results in the media.**

Figure 4: Question #11.3 from the RRING survey on socially responsible research/innovation

If yes: What steps, if any, have you taken to make the results of your research and innovation work accessible to as wide a public as possible?

Step	Percentage
Non-specific, vague, platitude or virtue signalling response	1%
Public accessibility of R&I results	31%
Institutional- or project-based/supported publishing of research findings (outside of scholarly publishing)	1%
Publishing/disseminating R&I outputs using institutional open access repositories or external open access databases	4%
Personally publishing/disseminating R&I outputs to the public outside of scholarly publishing	7%
Engaging with non-academic/public stakeholders through outreach activities after research is completed	10%
Promoting R&I results in the media	8%
Open access scholarly publishing	7%
Efforts to facilitate public understanding of R&I results	3%
Another step taken to make R&I results available to the public	2%
Sharing R&I work within professional R&I stakeholder environments	23%
Unclear / Uncertain	2%

2.2 Peaceful Applications of S&T

No evidence available from existing sources.

2.3 Scientific Culture

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, addresses socially inclusive identification of knowledge needs. This is an indicator of whether scientific researchers are conducting upstream public engagement.

Question #5.1 from the RRING survey assesses whether scientific researchers´ think it is important to involve individuals and/organizations with a diverse range of perspectives and expertise when planning their research and innovation work. The responses range from Strongly Disagree to Strongly Agree. **27% of the researchers strongly agree with the statement, 30% agree, 19% somewhat agree, 3% disagree, 2% somewhat disagree, 2% strongly disagree and 16% expressed feeling neutral about it.**

Figure 5: Question #5.1 from the RRING survey on socially responsible research/innovation

Please specify your level of agreement with the following statement: • It is important to involve individuals/organizations with a diverse range of perspectives and expertise when planning my research and innovation work							
Strongly disagree	**Disagree**	**Somewhat disagree**	**Neutral**	**Somewhat agree**	**Agree**	**Strongly agree**	**N/A**
2%	3%	2%	16%	19%	30%	27%	2%

Going deeper into the topic, question #13.1 from the RRING survey assesses whether scientific researchers´ think it is important to involve individuals and/organizations with a diverse range of perspectives and expertise when planning their research and innovation work. The responses range from Strongly Disagree to Strongly Agree. **42% of the**

researchers strongly agree with the statement, 28% agree, 16% somewhat agree, 8% neutral, 4% somewhat disagree, 2% disagree and only 1% strongly disagree.

Figure 6: Question #13.1 from the RRING survey on socially responsible research/innovation

Please specify your level of agreement with the following statement:
- Research and innovation should address societal needs

Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree	N/A
3%	0%	0%	3%	8%	24%	61%	1%

Question #13.2 and #13.3 from the RRING survey continues with the same issue and asks what steps have the researchers´ taken to ensure their research and innovation work addresses societal needs. **45% of the researchers expressed having taken steps in the last 12 months. 10% said no, 35% were unsure and 2% preferred not to say.**

Figure 7: Question #13.2 from the RRING survey on socially responsible research/innovation

In the last 12 months, have you taken steps to ensure your research and innovation work addresses societal needs?

Yes	No	Unsure	N/A	Prefer not to say
45%	10%	35%	8%	2%

Regarding the steps taken to make the results of their research accessible to the public by the researchers who said yes in the last question, **44% of them said addressing societal needs in their R&I work, and 30% specified selecting the research topic by their own perception of societal needs.**

Figure 8: Question #13.3 from the RRING survey on socially responsible research/innovation

If yes: What steps, if any, have you taken to ensure your research and innovation work addresses societal needs?

Step	Percentage
Non-specific, vague, platitude or virtue signalling response	6%
Addressing societal needs in R&I work	44%
Participatory process: research topic/problem defined by societal needs	3%
Selection of research topic/problem defined by researchers´ perceptions of societal needs	30%
Societal issues as a substantive dimension in R&I content/focus	1%
Communicating R&I work/activities to public/non-academic stakeholders	9%
Other step taken to address societal needs in R&I work	5%
Unclear / Uncertain	1%

## Evidence Available for Public Perspectives on Science and Scientific Researchers

2.1 Knowledge Society

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess whether the general public "recognise value and use" in what science and technology are offering to society.

Question #6 from the WGM survey 2018 evaluates the interest of the public in obtaining information about science in the past 30 days. Results from the data generated by this particular survey question indicate whether the general public see value in investing their time obtaining this type of information.

69% of people indicated they didn't try to get any information about science in the past 30 days, while 27% specified that they did. Only 4% expressed having tried, but not much.

*Figure 9: Question #6 from the Wellcome Global Monitor Survey 2018*
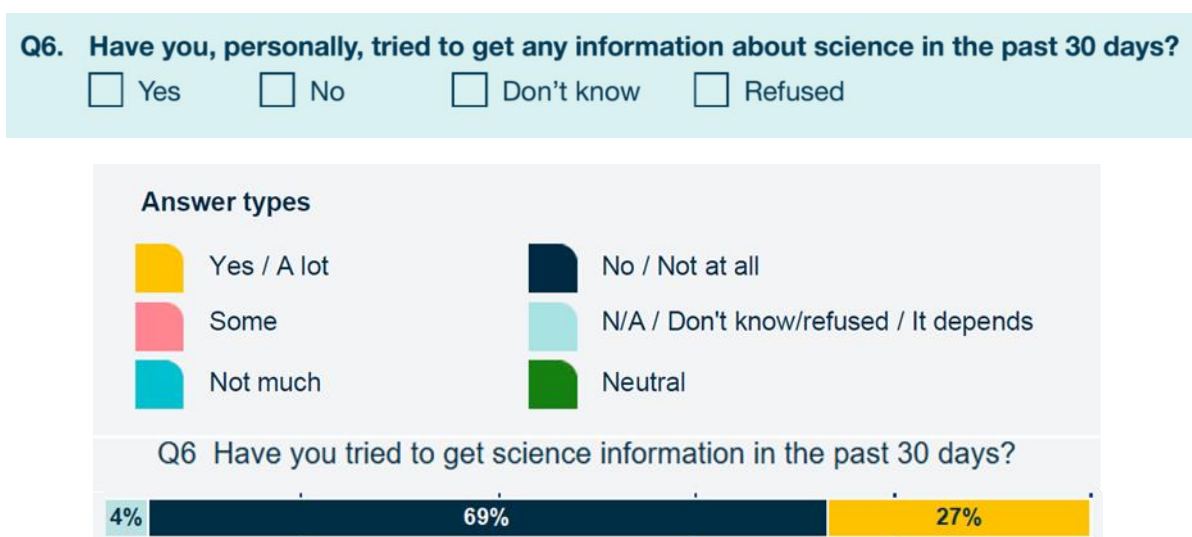
Question #8 from the WGM survey 2018 assesses the public's interest in knowing more about science. The question implicitly measures whether members of the public see value or utility in expanding their understanding of science. **41% of people indicated they would like to know more about science, while 38% specified that they wouldn't.**[93]

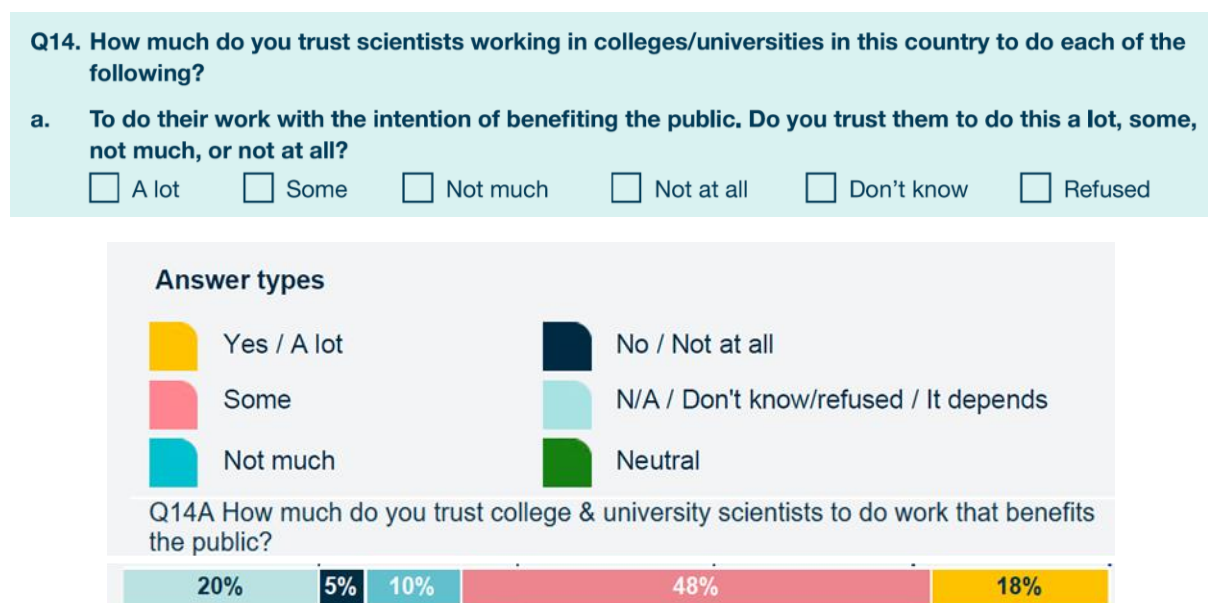*Figure 10: Question #8 from the Wellcome Global Monitor Survey 2018*

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[93] 21% of the interviewees expressed that "it would depend", although the reasons are not specified.

Q8 Would you like to know more about science?

21%	38%	41%
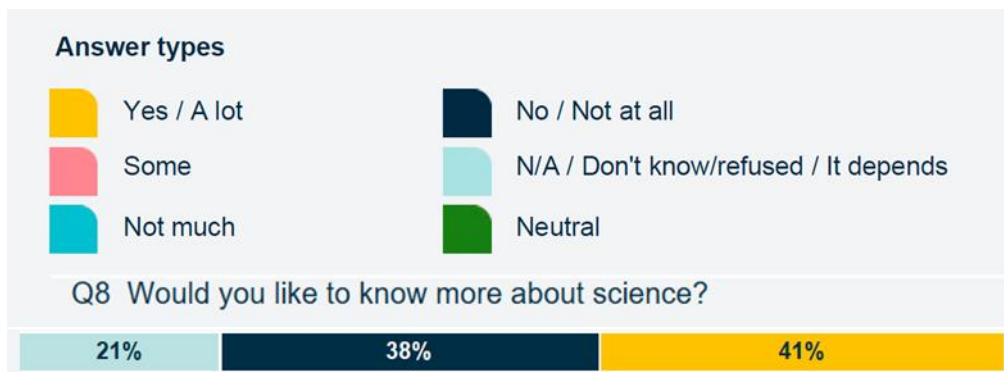
Question #14 from the WGM survey 2018 evaluates the level of public trust in the scientists working in colleges/universities in their country of residence. It specifically addresses public views about the nature of university scientists' work and whether it benefits the public.

48% of the people indicated trusting in scientists working in colleges/universities to "some extent", 18% expressed trusting in them "a lot", 10% specified not trusting in them too much, and 5% indicated not trusting in them at all.[94]

Figure 11: Question #14 from the Wellcome Global Monitor Survey 2018

Q14. How much do you trust scientists working in colleges/universities in this country to do each of the following?

a. To do their work with the intention of benefiting the public. Do you trust them to do this a lot, some, not much, or not at all?

☐ A lot   ☐ Some   ☐ Not much   ☐ Not at all   ☐ Don't know   ☐ Refused

Q14A How much do you trust college & university scientists to do work that benefits the public?

20%	5%	10%	48%	18%

Question #15 from the WGM survey 2018 assesses the level of public trust in the scientists working in companies (e.g., pharmaceutical or agricultural industries) in their country of residence. It specifically addresses public views about the nature of company scientists' work and whether it benefits the public.

40% of the people indicated trusting in scientists working in colleges/universities to "some extent", 16% expressed not trusting in them too much, 14% specified trusting in them "a lot", and 8% indicated not trusting in them at all.[95]

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[94] 20% of the interviewees didn't answer or specified that their level of trust would depend on other factors.
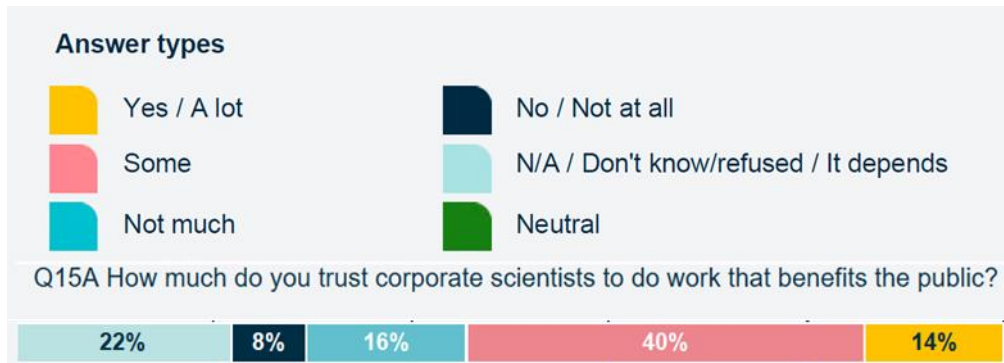[95] 22% of the interviewees didn't answer or specified that their level of trust would depend on other factors.

Figure 12: Question #15 from the Wellcome Global Monitor Survey 2018

2.2 Peaceful Applications of S&T

No evidence available from existing sources.

2.3 Scientific Culture

The following question and its answers, extracted from the surveys mentioned in the Data Sources section, assess whether the results of scientific research are available to the general public and whether the level of the society engagement with science is sufficient for them to consume this information.

Question #6 from the WGM survey 2018 evaluates the interest of the public in obtaining information about science in the past 30 days. This particular question not only indicates whether the general public see value in investing their time obtaining this type of information, but also the level engagement they feel towards science research and its results. **69% of people indicated they didn't try to get any information about science in the past 30 days, while 27% specified that they did. Only 4% expressed having tried, but not much.**

Figure 13: Question #6 from the Wellcome Global Monitor Survey 2018

Answer types

■ (yellow)	Yes / A lot	■ (dark navy)	No / Not at all
■ (pink)	Some	■ (light cyan)	N/A / Don't know/refused / It depends
■ (cyan)	Not much	■ (green)	Neutral

Q6 Have you tried to get science information in the past 30 days?

4%	69%	27%

3 Research informing Policy

> *Member States should use scientific knowledge in an inclusive and accountable manner to inform national policy and decision-making, and to advance international cooperation and development.*

The below topics refer to science in society grouped by the Key Priority Area 3

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

3. Research informing Policy

	(a)	(b)
3.1 Uses S&T Knowledge for Decision-Making and Policy	Yes/No	Yes/No
3.2 Scientists Advise Government	Yes/No	Yes/No

Evidence Available for Member States

3.1 Uses S&T Knowledge for Decision-Making and Policy

Decision making at the Government/ Ministry/ Municipal level

The notion of 'evidence-based policy' usually is understood as evaluation based on quantitative indicators or simple statistics, so in-depth analysis, research and future foresight is not a component of decision making at the Government/ Ministry (or it's subordinate institution)/ Municipal level. Sometimes external experts are involved in preparation of reports in particular field. However, such kind of evaluation is an object of public procurement, and service providers usually are public institutions.

There are common instruments for involving stakeholders into decision making procedures at the Government level or at the particular ministries, i.e., 'working group' and 'public consultation'. In general, the public is involved using diverse public engagement techniques, such as 'public communication', 'public activism' (see more https://epilietis.lrv.lt/).

Composition of working group is quite flexible. It could consist of members representing different interests as well as experts. All they have the same functions in the working group; therefore, a scientific evaluation and debate has no specific procedures or priority.

Lithuania joined the international Open Government Partnership in 2011. It is concentrated on citizen participation as well as openness and transparency of the governmental institutions. In 2018, the Government Office prepared Methodology for Public Consultations (in Lithuanian – "Viešųjų konsultacijų metodika") as well as Guidelines for Implementing the Methodology for Public Consultations (in Lithuanian – "Viešųjų konsultacijų metodikos taikymo gairės"). However, scientists and researchers are not defined as a special category of the participants among NGOs, associations, professional groups, local residents, etc.

https://lrvk.lrv.lt/lt/apie-vyriausybes-kanceliarija/projektai/vykdomi-projektai/atviros-vyriausybes-partneryste

Network of Research and Innovation Officers (SRATA).

LR President's recommendation (2020) on Strengthening Lithuanian science and innovation policies for the implementation of Horizon.

3.2 Scientists Advise Government

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendations:

Policy making at the Seimas (the Parliament)

According to the Statute of the Seimas (Seimo statutas, LRS 1994 m. vasario 17 d. nutarimas Nr. I-399, redakcija 2020-06-17), article 145, the impartial expert evaluation of the draft law may be ordered before the beginning of the approval procedure. In this case, the expert conclusion must be presented during debates in the relevant committees and during session of the Seimas. The problem occurs in defining who is an expert, because specific criteria / necessary scientific qualifications are not defined in the Statute of Seimas.

There are several councils at the Seimas that are considered as expert establishments to be involved into policy analysis and development in a particular field (e.g., National Health Council, Lithuanian Education Council). These councils consist of delegated representatives from different organizations, not necessarily from higher education/ research institutions.

> **Statutas, 145 straipsnis. Privalomos išvados dėl įstatymo projekto**
>
> *2. Jeigu įstatymo projektu siūloma iš esmės keisti teisinį reglamentavimą (nustatyti, pakeisti arba panaikinti teisės subjektų teises arba pareigas, formuluoti tam tikrų sričių reformos kryptis arba raidos strategiją) ir pagrindinis komitetas arba ne mažiau kaip 1/5 Seimo narių (bet ne vėliau kaip 72 valandos po svarstymo pagrindiniame komitete pabaigos) paremia tokią iniciatyvą, nutarus pradėti projekto svarstymo procedūrą Seimo valdybos nustatyta tvarka užsakomas nepriklausomas ekspertinis teisės akto projekto įvertinimas.*
>
> *3. Ekspertinė išvada yra teisės aktą lydintis dokumentas, pristatomas svarstymų komitetuose ir Seimo posėdyje metu.*

Evidence Available for Research Staff at Research Performing Organisations

3.1 Uses S&T Knowledge for Decision-Making and Policy

No evidence available from existing sources.

3.2 Scientists Advise Government

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

3.1 Uses S&T Knowledge for Decision-Making and Policy

No evidence available from existing sources.

3.2 Scientists Advise Government

No evidence available from existing sources.

4   Science is a common good

Member States are urged to treat public funding of research and development as a form of public investment, the returns on which are long term and serve public interest. Open science, including the sharing of data, methods, results and the knowledge derived from science, intensifies the public role of science and should be facilitated and encouraged.

The below topics refer to science in society grouped by the Key Priority Area 4

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

4. Science is a Common Good

	(a)	(b)
4.1 Openness	Yes/No	Yes/No

Evidence Available for Member States

4.1 Openness

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to treat public funding of research and development as a form of public investment to serve the long-term public interest:

> Open science in LT LAW ON HIGHER EDUCATION AND RESEARCH OF THE REPUBLIC OF LITHUANIA NO. XI-242.

> Research Council of Lithuania have RESOLUTION REGARDING THE APPROVAL OF THE GUIDELINES ON OPEN ACCESS TO SCIENTIFIC PUBLICATIONS AND DATA.

> Tauginienė, L. (2020). Mokslinių tyrimų ir publikavimo etikos pažeidimų piniginė vertė atšaukus mokslo publikaciją [in English: The Cost of Research and Publication Ethics Breaches upon Retracted Publication]. Vilnius: Akademinės etikos ir procedūrų kontrolieriaus tarnyba. [https://etikostarnyba.lt/wp-content/uploads/2020/11/Moksliniu-tyrimu-ir-publikavimo-etikos-pazeidimu-piniginie-verte.pdf]

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to emphasize the public role of science:

> eLABa, https://www.elaba.lt/elaba-portal/

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation of encouraging the sharing of scientific research results:

> Local open data repositories, such as MIDAS (https://midas.lt/public-app.html#/midas?lang=en), LiDA for social sciences and humanities (http://www.lidata.eu/), Lituanistika (https://www.lituanistika.lt/)

> Lietuvos mokslo tarybos 2016 m. vasario 29 d. nutarimas Nr. VIII-2 "Dėl Atvirosios prieigos prie mokslo publikacijų ir duomenų gairių patvirtinimo" [available only in Lithuanian; https://www.e-tar.lt/portal/lt/legalAct/dceeeb10e05711e59cc8b27b54efaf6e]

> Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania)

> Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funder under Erasmus+ programme) – development of guidelines on research integrity in citizen science is foreseen

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendations to encourage the sharing of scientific knowledge derived from research

> eLABa, https://www.elaba.lt/elaba-portal/

Local open data repositories, such as MIDAS (https://midas.lt/public-app.html#/midas?lang=en), LiDA for social sciences and humanities (http://www.lidata.eu/), Lituanistika (https://www.lituanistika.lt/)

Evidence Available for Research Staff at Research Performing Organisations

4.1 Openness

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess whether researchers feel encouraged to share their scientific data to the public, thus reinforcing the public role of science.

Question #12.1 from the RRING survey assesses whether scientific researchers´ think it is important to make data from their research and innovation activities freely available to the public. The responses range from Strongly Disagree to Strongly Agree. **38% of the researchers strongly agree with the statement, 33% agree, 15% somewhat agree, 3% disagree, 1% somewhat disagree, 1% strongly disagree and 6% expressed feeling neutral about it.**

Figure 14: Question #12.1 from the RRING survey on socially responsible research/innovation

Please specify your level of agreement with the following statement: • It is important to make data from my research and innovation activities freely available to the public							
Strongly disagree	**Disagree**	**Somewhat disagree**	**Neutral**	**Somewhat agree**	**Agree**	**Strongly agree**	**N/A**
1%	3%	1%	6%	15%	33%	38%	3%

Question #12.2 and #12.3 from the RRING survey continues with the same issue and asks what steps have the researchers´ taken to make data from their research and innovation activities freely available. **43% of the researchers expressed having taken steps to make their data freely available. 20% said no and 19% were unsure.**

Figure 15: Question #12.2 from the RRING survey on socially responsible research/innovation

In the last 12 months, have you taken steps to make data from your research and innovation activities freely available?			
Yes	**No**	**Unsure**	**N/A**
43%	20%	19%	17%

Question #11 from the OECD International Survey of Scientific Authors evaluates whether the researchers have made the data and code of their finished work available to their peers. This is an indicator of the level of openness within the scientific community and thus the on the public role of science. **42% of the researchers expressed not making the data nor the**

code available to fellow researchers, while 37% confirmed sharing their data. 16% of the interviewees specified making data and code available to their peers. Only 5% shared their code.

Figure 16: Question #11 from the OECD International Survey of Scientific Authors

Q11

Have you or your co-authors made them directly available to fellow researchers?

Yes, only data	Yes, only code	Yes, both data and code	Neither data nor code
37%	5%	16%	42%

Question #12 from the OECD International Survey of Scientific Authors assesses the mechanisms of accessibility and the characteristics of the data and code coming out from published research work. **24% of the researchers said that, in the case of data, they comply with standards that facilitate combining with other data sources. 25% specified that it is possible for interested users to search online for information about their outputs. 20% assured that there is a standard mechanism for requesting and securing access to their outputs. 15% said that detailed and comprehensive metadata or explanations was provided.**

Figure 17: Question #12 from the OECD International Survey of Scientific Authors

Q12

Which of the following apply to data and code coming out of your research work for this paper?

Interested users have to subscribe or pay a fee to access any of these outputs	3%
Outputs have been assigned unique and permanent digital object identifiers	4%
There is a standard mechanism for requesting and securing access to these outputs	20%
It is possible for interested users to search online for information about these outputs	25%
A clear usage licence was applied	8%
Detailed and comprehensive metadata or explanations was provided	15%
In the case of data, they comply with standards that facilitate combining with other data sources	24%

The following questions and their answers assess the researchers´ perspective on the importance of sharing their scientific research methods. This is an indicator of the success of the culture of open access and transparency.

Question #10.1 from the RRING survey evaluates whether scientific researchers´ think it is important to make their research and innovation methods/processes open and transparent. The responses range from Strongly Disagree to Strongly Agree. **61% of the researchers strongly agree with the statement, 26% agree, 8% somewhat agree, 1% somewhat disagree, 1% disagree, 1% strongly disagree and 1% expressed feeling neutral about it.**

Figure 18: Question #10.1 from the RRING survey on socially responsible research/innovation

Please specify your level of agreement with the following statement:
- It is important to make my research and innovation methods/processes open and transparent

Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree	N/A
1%	1%	1%	1%	8%	26%	61%	2%

Question #10.2 and #10.3 from the RRING survey continues with the same issue and asks what steps have the researchers´ taken to make their research and innovation methods/processes open and transparent. **55% of the researchers expressed having taken steps to make their data freely available. 10% said no and 17% were unsure.**

Figure 19: Question #10.2 from the RRING survey on socially responsible research/innovation

In the last 12 months, have you taken steps to ensure your research and innovation methods/processes are open and transparent?

Yes	No	Unsure	N/A	Prefer not to say
55%	10%	17%	17%	1%

Regarding the steps taken to ensure their research and innovation methods/processes are open and transparent by the researchers who said yes in the last question, **27% of them said following pathways to open/transparent R&I methods and processes. 25% specified exercising one-way dissemination with no reference to research methods/processes or transparency/openness per se, and 13% said documenting/reporting research and decision-making processes.**

Figure 20: Question #10.3 from the RRING survey on socially responsible research/innovation

If yes: What steps, if any, have you taken to ensure your research and innovation methods/processes are open and transparent?

Step	Percentage
Non-specific	7%
Pathways to open/transparent R&I methods and processes	27%
Documenting/reporting research and decision-making processes	13%
Disclosing research data, raw data, codes, and statistics	7%
Seeking upstream academic/researcher feedback on research ideas or plans	4%
Seeking upstream feedback on research ideas/plans from non-academics/non-researchers	1%
Seeking approval for methods/processes in research applications	3%
Participation in or engagement with relevant committees	1%
Other step taken to ensure R&I openness and transparency	4%
One-way dissemination with no reference to research methods/processes or transparency/openness per se	25%
Open access publication	6%

The following question and its answers assess whether researchers feel encouraged to share their scientific research results and knowledge derived from research to the public. In addition to the afore mentioned dimensions, the possibility of knowing how and what was achieved through scientific research strengthens the public role of science.

Question #6 from the OECD International Survey of Scientific Authors evaluates the level of accessibility to published papers. This is an indicator of the state of open access culture within the scientific world. **46% of the researchers said that any person interested in reading their paper would be able to download it from a journal that does not charge for access to any of its contents. 26% specified that access would be possible only through the publisher and it would require a paid subscription.**

Figure 21: Question #6 from the OECD International Survey of Scientific Authors

Q6

Please put yourself in the position of someone interested in reading this paper right after it was published. Would this person have been able to download it from the publisher's site at no cost or without subscription?

Yes, from a journal that does not charge for access to any of its contents	46%
Yes, from a journal that charges for access, because you (or your organisation or funder) paid to allow free user access to this paper.	2%
No, access through the publisher required a subscription or paying for access but it was also available from an open repository or webpage unrelated to the publisher	9%
No, access was only possible through the publisher and required a subscription or paying for access	26%
Do not know / do not recall	16%

Question #13 from the OECD International Survey of Scientific Authors assesses the factors that have constrained or enhanced the level of access granted to the research outputs of published papers. **37% of the researchers expressed that formal sharing requirements by publishers, funders, policy and /or organisation significantly constrained the level of access granted to the outputs of their papers. 24% think that the main factor constraining the access is the intellectual property protection, while 20% specified that it also has to do with the resources and capabilities for managing disclosure and sharing.**

Regarding the factors that significantly enhance the level of access granted to the research outputs of their papers, **25% of the researchers think the resources and capabilities for managing disclosure and sharing is the main one. 22% said that it is their career objectives, while another 22% think that it has to do with norms within their research field and peer expectations. Only 16% expressed that the formal sharing requirements enhance the level of access.**

Figure 22: Question #13 from the OECD International Survey of Scientific Authors

Q13

Please indicate whether the following factors have significantly constrained or enhanced the level of access granted to the research outputs from this paper (i.e. data, codes and/or publication).

	Significantly constrained level of access granted	No significant impact	Significantly enhanced level of access granted
Formal sharing requirements by publishers/funders/policy/organisation	37%	47%	16%
Intellectual property protection	24%	69%	7%
Career objectives	10%	68%	22%
Norms within your research field and peer expectations	16%	62%	22%
Resources and capabilities for managing disclosure and sharing	20%	55%	25%

Evidence Available for Public Perspectives on Science and Scientific Researchers

4.1 Openness

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess whether the general public understand what science and scientists are, as well as the level of trust placed in them. These results are an indicator of a country's progress in establishing a public role of science.

Question #2 from the WGM survey 2018 is designed to measure the self-reported public understanding of science and scientists. **48% of the people indicated understanding the meaning of "science" and "scientists", 35% expressed understanding it to some extent and 13% specified not understanding it.**

Figure 23: Question #2 from the Wellcome Global Monitor Survey 2018
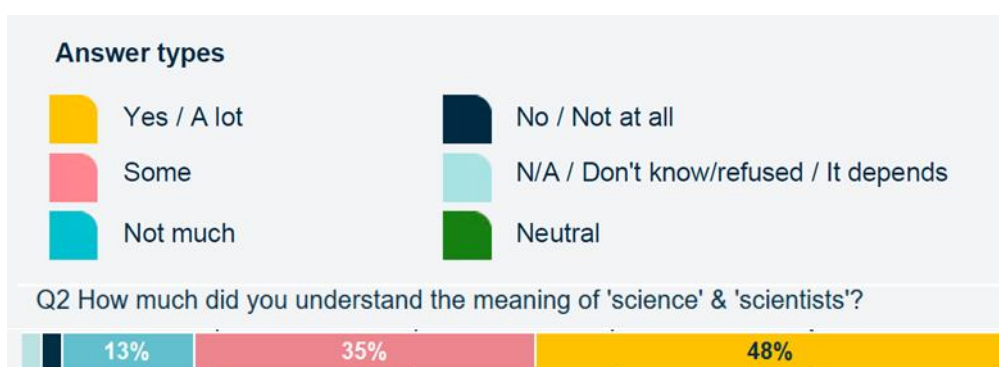
Question #14 from the WGM survey 2018 evaluates the level of the public trust in scientists working in colleges/universities in their country of residence and whether their work benefits

the public. It also asks about the transparency on who is funding their work and whether this information affects or not the level of trust.

48% of the people indicated trusting scientists working in colleges/universities to do their work with the intention of benefiting the public to some extent. 18% expressed trusting in them completely, while 10% specified that their level of trust in them is low. Only 5% of the interviewees indicated not trusting in them at all.[96]

36% of the people indicated trusting scientists working in colleges/universities to be open and honest about who is paying for their work to some extent. 16% expressed trusting in them completely, while 13% specified that their level of trust in them is low. Only 6% of the interviewees indicated not trusting in them at all.[97]

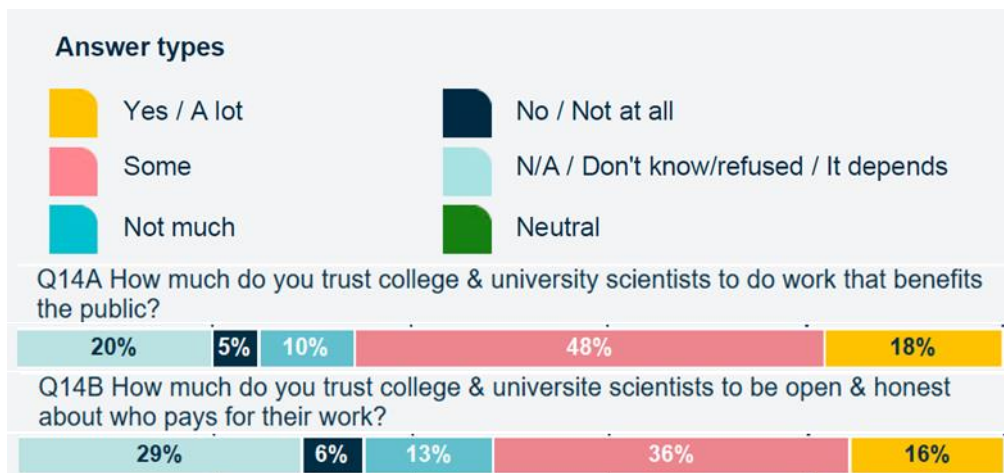*Figure 24: Question #14 from the Wellcome Global Monitor Survey 2018*

Question #15 from the WGM survey 2018 assesses the level of public trust in scientists working for companies (e.g., pharmaceutical or agricultural industries) and whether their work benefits the public. It also asks about the transparency on who is funding their work and whether this information affects or not the level of trust.

40% of the people indicated trusting scientists working for companies to do their work with the intention of benefiting the public to some extent. 16% expressed that their level

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[96] 20% didn't know or refused to answer or expressed that it would depend on other factors.
[97] 29% didn't know or refused to answer or expressed that it would depend on other factors.

of trust in them is low, while 14% specified that they trusted in them completely. Only 8% of the interviewees indicated not trusting in them at all.[98]

31% of the people indicated trusting scientists working for companies to be open and honest about who is paying for their work to some extent. 17% expressed that their level of trust in them is low, while 12% specified that they trust in them completely. Only 10% of the interviewees indicated not trusting in them at all.[99]

Figure 25: Question #15 from the Wellcome Global Monitor Survey 2018
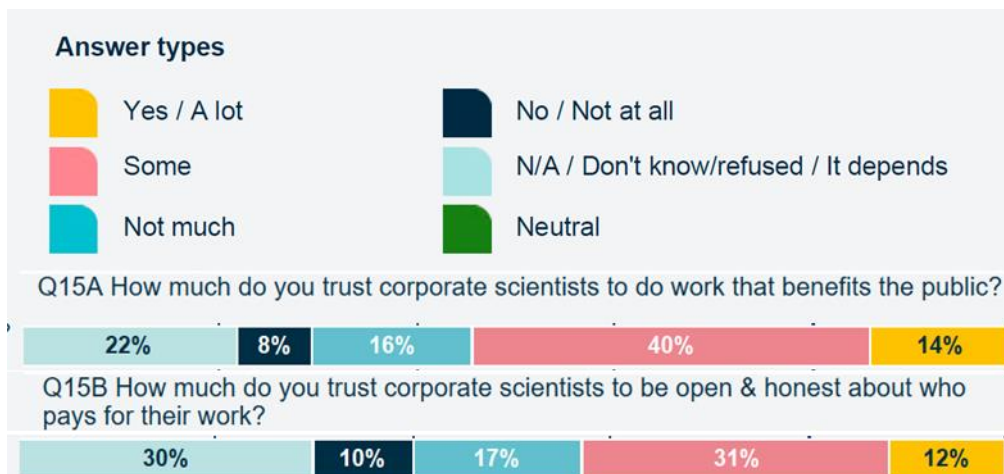
Q15. Now, thinking about companies – for example, those who make medicines or agricultural supplies – how much do you trust scientists working for companies in this country to do each of the following?

a. To do their work with the intention of benefiting the public. Do you trust them to do this a lot, some, not much, or not at all?
☐ A lot   ☐ Some   ☐ Not much   ☐ Not at all   ☐ Don't know   ☐ Refused

b. To be open and honest about who is paying for their work. Do you trust them to do this a lot, some, not much, or not at all?
☐ A lot   ☐ Some   ☐ Not much   ☐ Not at all   ☐ Don't know   ☐ Refused

Answer types

🟡 Yes / A lot		⬛ No / Not at all	
🟥 Some		🟦 N/A / Don't know/refused / It depends	
🟦 Not much		🟩 Neutral	

Q15A How much do you trust corporate scientists to do work that benefits the public?

22%	8%	16%	40%	14%

Q15B How much do you trust corporate scientists to be open & honest about who pays for their work?

30%	10%	17%	31%	12%

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[98] 22% didn't know or refused to answer or expressed that it would depend on other factors.
[99] 30% didn't know or refused to answer or expressed that it would depend on other factors.

5 Diversity in Science

> *All citizens enjoy equal opportunities for the initial education and training needed for, and equal access to employment in scientific research. Scientific researchers enjoy equitable conditions of work. The participation of women and other under-represented groups should be actively encouraged in order to remediate inequalities.*

The below topics refer to science in society grouped by the Key Priority Area 5

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

5. Diversity in Science

	(a)	(b)
5.1 Non-Discrimination and Diversity	Yes/No	Yes/No

Evidence Available for Member States

5.1 Non-Discrimination and Diversity

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to assure equal opportunities for the initial education and training needed for, and equal access to employment in scientific research to all citizens.

> Inclusive and non-discriminatory work conditions and access to education and employment in science.

The survey of researchers' working conditions_lt.pdf

[APPROVAL OF THE STATE DEVELOPMENT PROGRAM FOR STUDIES, RESEARCH AND EXPERIMENTAL (SOCIAL, CULTURAL) DEVELOPMENT 2013–2020](#)

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to encourage the participation of women and other under-represented groups to remediate inequalities:

The Law on Equal Opportunities for Women and Men[100] since 1998 forbids any discrimination – direct and indirect – on the grounds of sex, harassment on the grounds of sex, sexual harassment and an instruction to directly or indirectly discriminate against persons on the grounds of sex. The Law sets out preconditions for gender mainstreaming. All State and municipal institutions and agencies must ensure that equal rights for women and men are ensured in all the legal acts drafted and enacted by them, must draw up and implement programmes and measures aimed at ensuring equal opportunities for women and men and, in the manner prescribed by laws, must support the programmes of public establishments, associations and charitable foundations which assist in implementing equal opportunities for women and men.

The 4th National Programme on Equal Opportunities for Women and Men 2015–2021 and its Action Plan is being implemented in order to achieve gender equality de facto. The Programme is complex covering gender equality activities in priority areas. They are: employment, science and education, health-care, environmental protection, national defense, decision-making, EU and international cooperation and developing mechanisms and methods to implement equal opportunities for women and men. Different ministries are responsible for the implementation of the concrete measures. Municipalities, women's organizations, gender studies centres, social partners and other relevant bodies are encouraged to cooperate in implementation. The Programme joins the efforts of State institutions, women's non-governmental organizations, researchers and social partners to reduce inequalities of different situations of women and men.

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[100] https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.69453/asr

Minister of Education and Science of the Republic of Lithuania 2014 December 23 Order No. V-1265 RECOMMENDATIONS FOR ENSURING EQUAL OPPORTUNITIES FOR MEN AND WOMEN IN LITHUANIAN SCIENTIFIC AND STUDY INSTITUTIONS, the aim of which is to establish guidelines for Lithuanian research and study institutions that promote equality between women and women and eliminate inequalities. to improve the gender balance in different fields of science and to increase the number of women in top scientific and administrative positions.

ORDER OF THE MINISTER OF SOCIAL SECURITY AND LABOR OF THE REPUBLIC OF LITHUANIA July 3 No. A1-641Vilnius

The Equal Opportunities Network is a cooperation mechanism supervised by the Equal Opportunities Division for Women and Men of the Ministry of Social Security and Labour. The Equal Opportunities Network consists of representatives of state institutions and bodies, municipal administrations, works with discrimination, gender equality, domestic violence or separate social groups.

The Equal Opportunities Network is designed to enable state and municipal institutions and agencies to make data-based decisions, as well as to share relevant information quickly and efficiently and to consult with social partners on equal opportunities issues.

The Network of Equal Opportunities Researchers is an advisory group operating at the national level, consisting of representatives of higher education institutions, private institutions, scientists, researchers and experts. The Network of Equal Opportunities Researchers operates as part of a wider cooperation mechanism, the Equal Opportunities Network.

The Network of Equal Opportunities Researchers cooperates with the institutions formulating and implementing the policy of equal opportunities and protection against domestic violence, and submits proposals to these institutions regarding the policy of equal opportunities and protection against domestic violence and its implementation.

22 June 2020, the second National Action Plan for the Implementation of the Women, Peace and Security Agenda for 2020-2024 was approved. The measures envisaged in it are aimed at strengthening the role of women in Lithuanian society and at the international level to ensure more active participation of Lithuania in international conflict prevention and resolution processes and the building of lasting peace. 2020 Project launched in September 2006 - UN Security Council Resolution 1325: Strengthening leadership to ensure safety at home (EN - Decoding UN Resolution 1325: Promoting Safety at Home though Greater Leadership). The aim of the project is to increase the participation of women in the peace and security process, thus contributing to the reduction of gender-based violence and the greater representation of women in decision-making at the national level and in self-government.

Evidence Available for Research Staff at Research Performing Organisations

5.1 Non-Discrimination and Diversity

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

5.1 Non-Discrimination and Diversity

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess whether the general public has had access to scientific knowledge at different types and levels of school. These results are an indicator of progress in assuring equal opportunities for education and training required for scientific research careers.

Question #5 from the WGM survey 2018 evaluates whether the public has learned about science at primary, secondary and/or college/university. This question is of vital importance to understand the potential vulnerabilities of the education system in each country and their relationship to other factors such as the economy and sociocultural contexts.

55% of the people indicated learning about science at primary school, 72% at secondary school and 29% at college/university. 26% of the people indicated not having learned about science at primary school, 17% at secondary school and 35% at college/university.

Figure 26: Question #5 from the Wellcome Global Monitor Survey 2018

Answer types

🟨 Yes / A lot		⬛ No / Not at all	
🟥 Some		🟦 N/A / Don't know/refused / It depends	
🟦 Not much		🟩 Neutral	

Q5A Did you learn about science at primary school?

16%	26%	55%

Q5B Did you learn about science at secondary school?

11%	17%	72%

Q5C Did you learn about science at college/university?

32%	5%	35%	29%

6 Human Rights Standards

> *Research should be conducted in a responsible manner that respects the human rights of scientific researchers and human research subjects alike. Open access to research results and the knowledge derived from them promotes the human right to share in scientific advancement and its benefits.*

The below topics refer to science in society grouped by the Key Priority Area 6

   (a) have measures been taken to implement the norms and standards of the Recommendation?

   (b) have any obstacles to compliance with the norms and standards been encountered?

6.   Human Rights Standards

	(a)	(b)
6.1 Human Right to Science	Yes/No	Yes/No
6.2 Human Right to Health	Yes/No	Yes/No
6.3 Other Human Rights	Yes/No	Yes/No
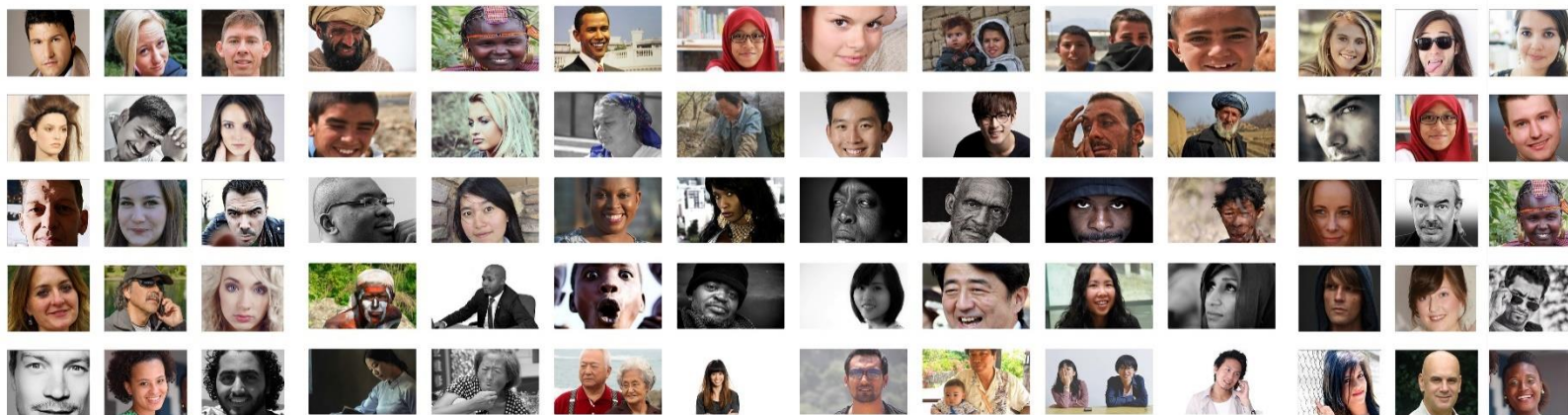
Evidence Available for Member States

6.1 Human Right to Science

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to promote access to the knowledge derived from research results:

> Local open data repositories, such as MIDAS (https://midas.lt/public-app.html#/midas?lang=en), LiDA for social sciences and humanities (http://www.lidata.eu/), Lituanistika (https://www.lituanistika.lt/)

6.2 Human Right to Health

No evidence available from existing sources.

6.3 Other Human Rights

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation for responsible scientific conduct respecting human rights of human research subjects:

> Responsible Research Barometer: report (English from p. 25, https://etikostarnyba.lt/wp-content/uploads/2020/08/Atsakingo-mokslo-barometras-2020-tyrimo-ataskaita_LT_EN.pdf)

> Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

> Anohina-Naumeca, A., Tauginienė, L. & Odineca, T. (2018). Academic integrity policies of Baltic state-financed universities in online public spaces. *International Journal for Educational Integrity*, 14: 8. https://doi.org/10.1007/s40979-018-0031-z [data on Lithuania available]

> Recommendations on Ethical Principles in the Conduct of Non-Biomedical Research Related to Human Health [only draft available in Lithuanian; drafted by Lithuanian Bioethics Committee]

> Reaffirming UNESCO's commitment to human rights

Questionnaire-Member States_UNESCO Human Rights Strategy 010219-2_Lithua....doc

Evidence Available for Research Staff at Research Performing Organisations

6.1 Human Right to Science

No evidence available from existing sources.

6.2 Human Right to Health

No evidence available from existing sources.

6.3 Other Human Rights

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

6.1 Human Right to Science

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess the level of the public understanding of science and its benefits to society. These results are an indicator of progress in advancing the human right to science.

Question #1 from the WGM survey 2018 evaluates how much the public knows about science. This question is related not only to the personal interest of the interviewee, but also to the question of how extensively scientific advancement is being shared in a country.

48% of the people indicated knowing about science to some extent. 33% expressed not knowing much about science, while 8% specified not knowing anything at all. Only 5% indicated knowing "a lot" about science.[101]

Figure 27: Question #1 from the Wellcome Global Monitor Survey 2018

Q1. How much do you, personally, know about science? Do you know a lot, some, not much, or nothing at all?
☐ A lot   ☐ Some   ☐ Not much   ☐ Not at all   ☐ Don't know   ☐ Refused

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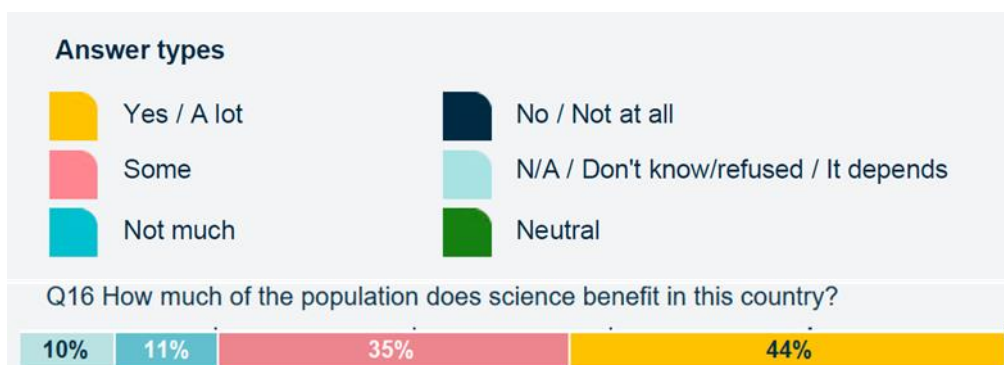[101] 6% didn't answer, refused to or said that it would depend on other factors.
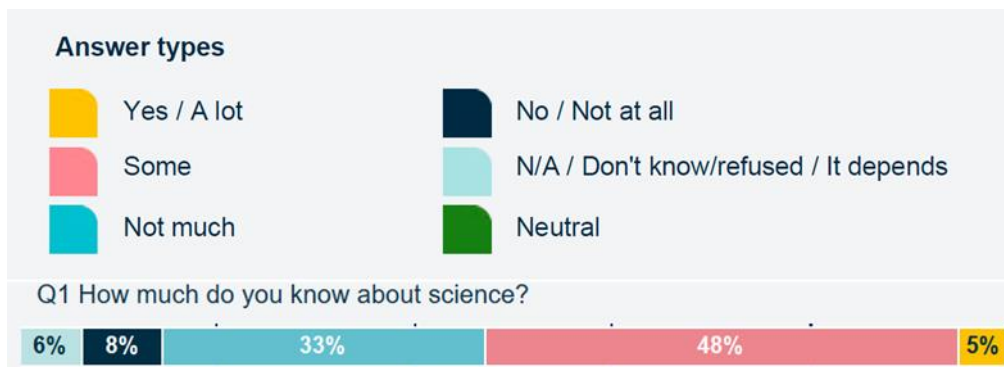
Question #16 from the WGM survey 2018 assesses public perceptions of the benefits of scientific work. **44% of the people indicated that the work that scientists do benefits most people in their country. 35% considers that it benefits only some people, while 11% expressed that the work does not benefit people too much.**[102]

Figure 28: Question #16 from the Wellcome Global Monitor Survey 2018

Question #17 from the WGM survey 2018 assesses public perceptions of the benefits of scientific work. This question relates to the question of whether scientific advancement is benefiting society. **51% of the people indicated that the work that scientists do benefits people like them in their country. 28% expressed that they don't think the scientific work benefits people like them at all.**[103]
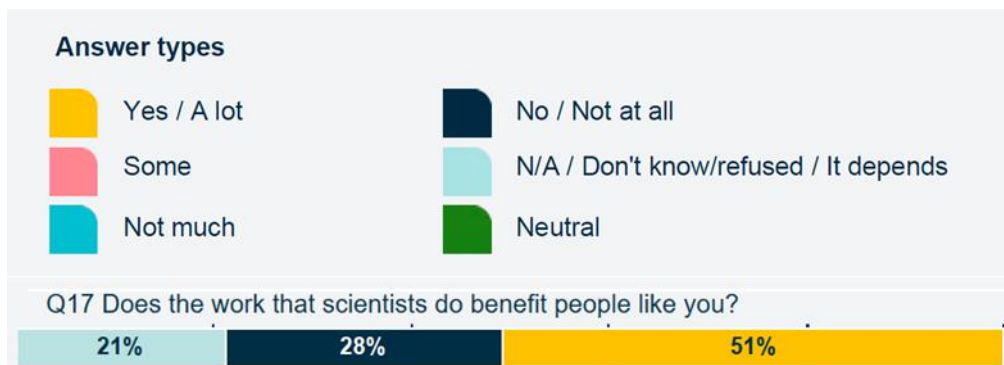
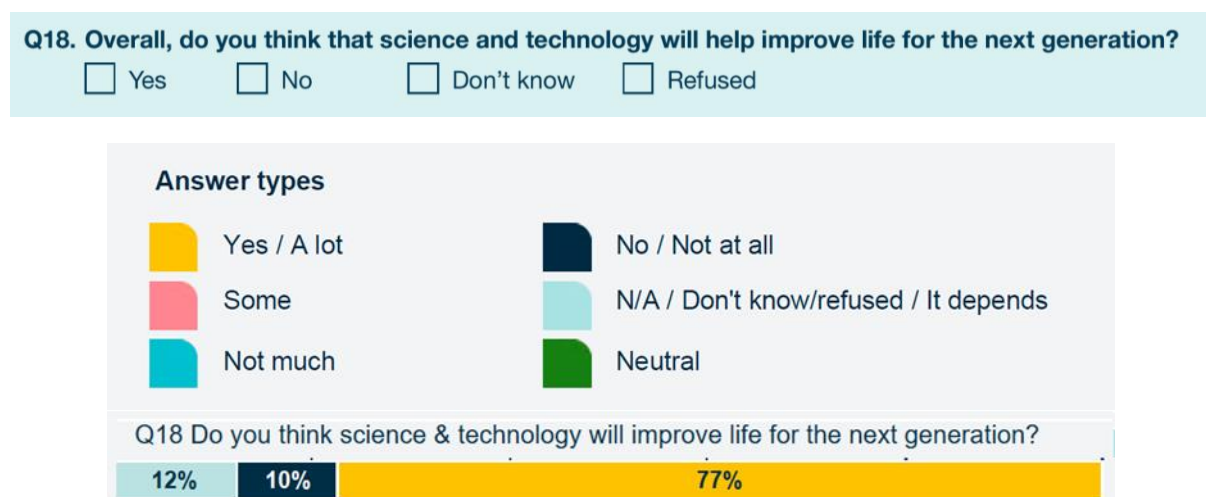*Figure 29: Question #17 from the Wellcome Global Monitor Survey 2018*

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[102] 10% didn't answer, refused to or said that it would depend on other factors.
[103] 21% didn't answer, refused to or said that it would depend on other factors.

Q17 Does the work that scientists do benefit people like you?

| 21% | 28% | 51% |

Question #21 from the WGM survey 2018 evaluates the public perception of science and technology and its influence on potential improvements to the quality of life of the next generation (as an indicator of scientific advancement benefiting society). **77% of the people agree that science and technology will help improve life for the next generation. 10% of the interviewees disagree that science and technology will help improve life for the next generation.**[104]

Figure 30: Question #18 from the Wellcome Global Monitor Survey 2018

Q18 Do you think science & technology will improve life for the next generation?
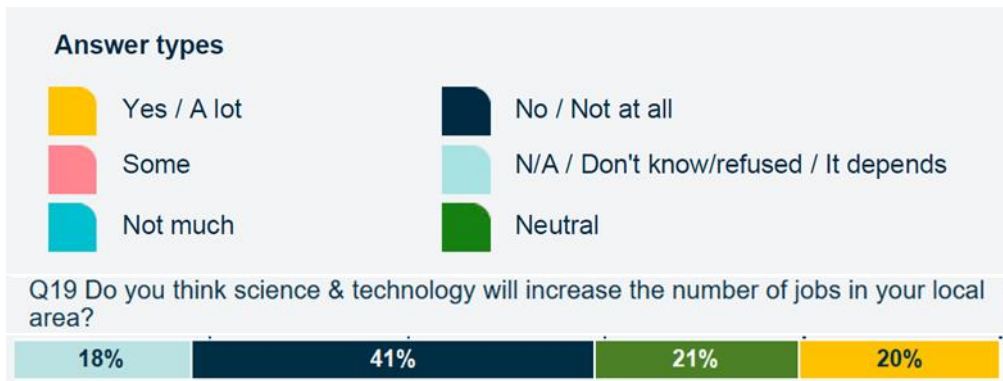
| 12% | 10% | 77% |

Question #19 from the WGM survey 2018 assesses the perceived impact of science and technology on employment rates in the next five years (as an indicator of scientific advancement benefiting society). **41% of the people think that science and technology will decrease the number of jobs in their area in the next five years, while 21% expressed feeling neutral about this statement. 20% think that the employment rates will increase.**[105]

Figure 31: Question #19 from the Wellcome Global Monitor Survey 2018

_____
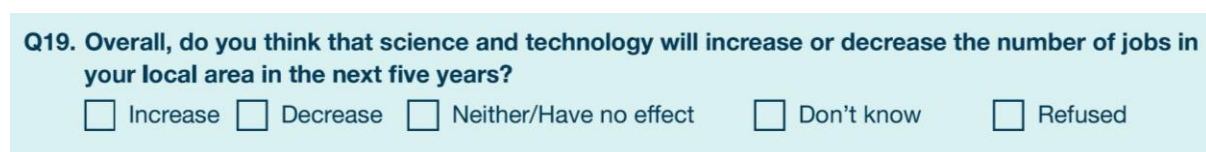
[104] 12% didn't answer, refused to or said that it would depend on other factors.
[105] 18% didn't answer, refused to or said that it would depend on other factors.

Q19 Do you think science & technology will increase the number of jobs in your local area?

| 18% | 41% | 21% | 20% |

6.2 Human Right to Health

No evidence available from existing sources.

6.3 Other Human Rights

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess the level of trust of the public in science and scientists. These results are an indicator of progress in the perception of a responsible scientific conduct where the trust is a downstream benefit of the responsibility being perceived as "good".

Question #11 from the WGM survey 2018 evaluates whether the public trusts the scientists. **43% of the people indicated trusting in scientists to some extent. 33% expressed trusting in them completely, while 7% of the interviewees specified that their level of trust in them is low. Only 3% indicated not trusting in them at all.**[106]

Figure 32: Question #11 from the Wellcome Global Monitor Survey 2018

Q11C How much do you trust scientists in this country?

| 14% | 7% | 43% | 33% |

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[106] 14% didn't answer, refused to or said that it would depend on other factors.

Question #12 from the WGM survey 2018 evaluates whether the public trusts the science in general. **50% of the people indicated trusting in science to some extent. 29% expressed trusting in science completely, while 8% specified that their level of trust in science is low. Only 2% of the interviewees indicated not trusting in science at all.**[107]

Figure 33: Question #12 from the Wellcome Global Monitor Survey 2018
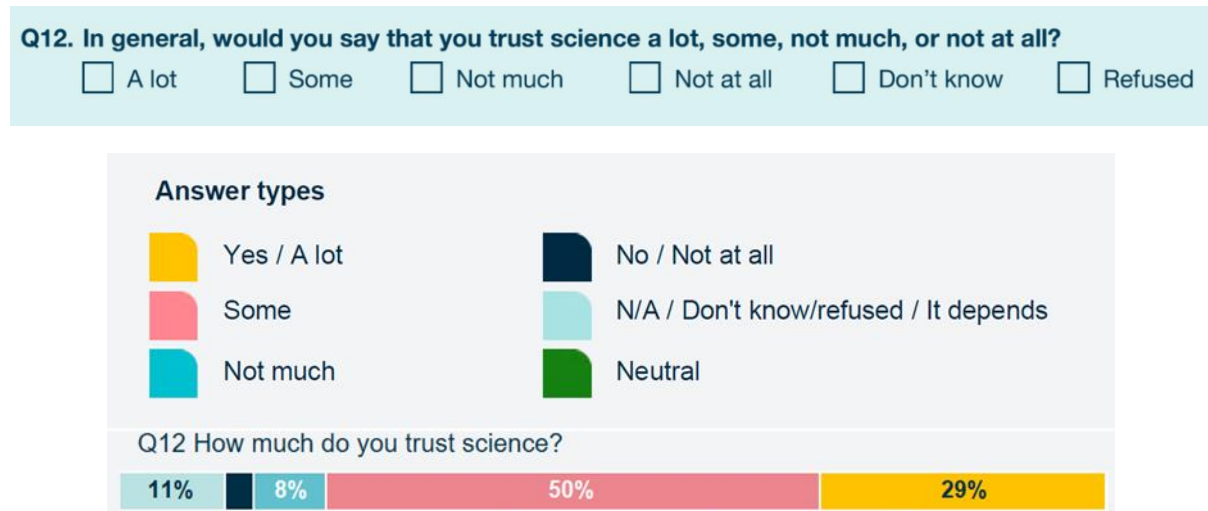
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7 Scientific Freedom and Scientific Responsibility

> *Scientific researchers respect public accountability and carry out their work in a humanely, scientifically, socially and ecologically responsible manner, while at the same time they enjoy the degree of autonomy and intellectual and academic freedom appropriate to their task and indispensable to the advancement of science and technology.*

The below topics refer to science in society grouped by the Key Priority Area 7
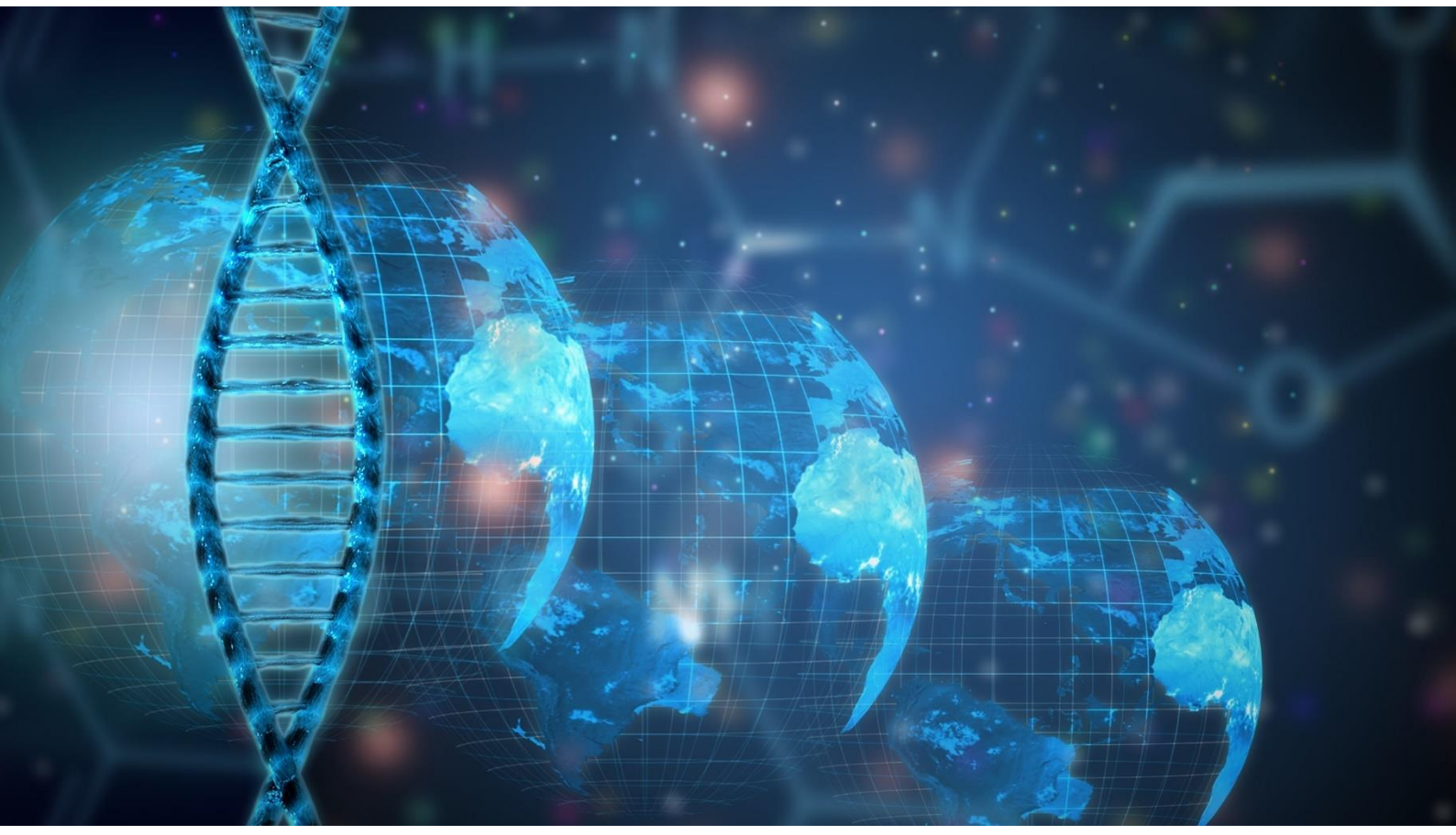
(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

7. Scientific Freedom and Scientific Responsibility

7.1 Scientific Freedom and Scientific Responsibility	(a) Yes/No	(b) Yes/No

Evidence Available for Member States

7.1 Scientific Freedom and Scientific Responsibility

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation of respect for public accountability:

> University Autonomy in Europe [data on Lithuania available, https://www.university-autonomy.eu/]

> Karran, T., Beiter, K., and Appiagyei-Atua, K. (2017). Measuring Academic Freedom in Europe: A criterion Referenced Approach. *Policy Reviews in Higher Education*, 1(2), 209–239. [data on Lithuania available]

> Beiter, K. D., Karran, T., and Appiagyei-Atua, K. (2016). Academic Freedom and Its Protection in the Law of European States. *European Journal of Comparative Law and Governance*, 3, 254–345. [data on Lithuania available]

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to execute scientific work in a humanely responsible manner:

> Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to execute scientific work in a scientifically responsible manner:

> Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania)

> Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funded under Erasmus+ programme) – development of guidelines on research integrity in citizen science is foreseen

> Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

> All LT scientists sign the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers. Some research institutions seek the Human Resources Strategy for Researchers.

This is policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to execute scientific work in a socially responsible manner:

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to execute scientific work in an ecologically responsible manner:

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to ensure autonomy appropriate to researchers' tasks:

University Autonomy in Europe [data on Lithuania available, https://www.university-autonomy.eu/]

Karran, T., Beiter, K., and Appiagyei-Atua, K. (2017). Measuring Academic Freedom in Europe: A criterion Referenced Approach. *Policy Reviews in Higher Education*, 1(2), 209–239. [data on Lithuania available]

Beiter, K. D., Karran, T., and Appiagyei-Atua, K. (2016). Academic Freedom and Its Protection in the Law of European States. *European Journal of Comparative Law and Governance*, 3, 254–345. [data on Lithuania available]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to ensure intellectual and academic freedom appropriate to researchers' tasks:

Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

LT signed the Bonn Declaration on Freedom of Scientific Research.

University Autonomy in Europe [data on Lithuania available, https://www.university-autonomy.eu/]

Karran, T., Beiter, K., and Appiagyei-Atua, K. (2017). Measuring Academic Freedom in Europe: A criterion Referenced Approach. *Policy Reviews in Higher Education*, 1(2), 209–239. [data on Lithuania available]

Beiter, K. D., Karran, T., and Appiagyei-Atua, K. (2016). Academic Freedom and Its Protection in the Law of European States. *European Journal of Comparative Law and Governance*, 3, 254–345. [data on Lithuania available]

Evidence Available for Research Staff at Research Performing Organisations

7.1 Scientific Freedom and Scientific Responsibility

Codes of ethics in each higher education and research institution.

Evidence Available for Public Perspectives on Science and Scientific Researchers

7.1 Scientific Freedom and Scientific Responsibility

No evidence available from existing sources.

8 Research Integrity, Research Ethics, and Ethics of STI

> *Member States should establish suitable means to address the ethics of science and research integrity, through developing education and training regarding the ethical dimensions of science, establishing and supporting science ethics policies and committees, and stimulating the professional ethics of researchers including their intellectual integrity, sensitivity to conflict of interest and vigilance as to the potential consequences of their research and development activities, including their technical applications.*

The below topics refer to science in society grouped by the Key Priority Area 8

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

8. Research Integrity, Research Ethics, and Ethics of STI

	(a)	(b)
8.1 Regulations Impacting on Research	Yes/No	Yes/No
8.2 Ethics Infrastructure	Yes/No	Yes/No
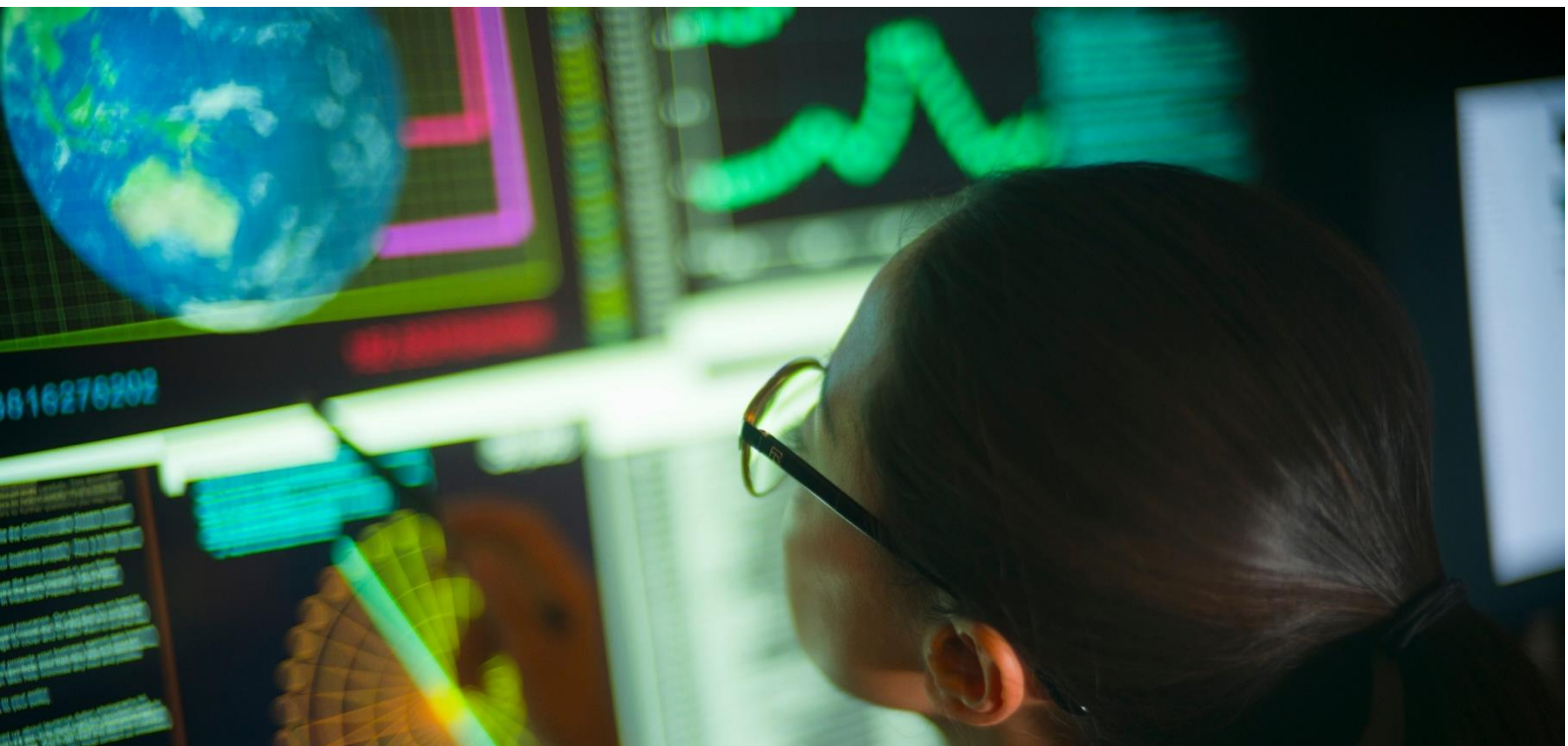
Evidence Available for Member States

8.1 Regulations Impacting on Research

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to establish means to address ethics of science:

> Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

> Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania).

> Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to establish means to address research integrity:

> Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funded under Erasmus+ programme) – development of guidelines on research integrity in citizen science envisaged

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to establish and support science ethics policies:

> Anohina-Naumeca, A., Tauginienė, L. & Odineca, T. (2018). Academic integrity policies of Baltic state-financed universities in online public spaces. *International Journal for Educational Integrity*, 14: 8. https://doi.org/10.1007/s40979-018-0031-z [data on Lithuania available]

> Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

> Responsible Research Barometer: report [in English from p. 25, https://etikostarnyba.lt/wp-content/uploads/2020/08/Atsakingo-mokslo-barometras-2020-tyrimo-ataskaita_LT_EN.pdf]

> Tauginienė, L., Cibulskienė, J., Berkmanas, T., Janutėnienė, J., Braziulienė, A., Kazlauskaitė, R., Kližentis, V., Toleikienė, R., Zamokas, G., Sipavičienė, S., Vaičaitis, V. ir Marozas, V. 2019. Publikavimo etika: gairės. Vilnius: Lietuvos

universitetų rektorių konferencija, https://lurk.lt/index.php/dokumentai/publikavimo-etika/publikavimo-etikos-gaires/

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to establish and support science ethics committees:

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

8.2 Ethics Infrastructure

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop education and training regarding the ethical dimensions of science:

Mokslo doktorantūros nuostatų 23 punktas [in English: Regulations on doctoral studies, art. 23] [available only in Lithuanian]

Aukštųjų mokyklų dėstytojų kompetencijų tobulinimo gairių 10 punktas [in English: Guidelines for the competence development of teaching staff in higher education institutions, art. 10]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to stimulate researchers' professional ethics:

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf] Guidelines for Ethical Review [available only in Lithuanian; to be approved in December 2020].

eLABa, https://www.elaba.lt/elaba-portal/

Lietuvos Respublikos biomedicininių tyrimų etikos įstatymas / Law on Ethics in Biomedical Research, https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/d7231dc0489411e4ba2fc5e712e90cd4?positionInSearchResults=5&searchModelUUID=649ca4dd-f4c9-4317-b831-f4dd1cae8290

Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funded under Erasmus+ programme) – development of guidelines on research integrity in citizen science is envisaged

Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania)

Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to stimulate researchers' intellectual integrity:

Atitikties mokslinių tyrimų etikai vertinimo gairės [in English: Guidelines for Ethical Review], approved on 10 December 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/12/Atitikties-mokslini%C5%B3-tyrim%C5%B3-etikai-vertinimo-gair%C4%97s.pdf]

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Training delivered by the Office of the Ombudsperson for Academic Ethics and Procedures, such as *Doctoral Supervision: Roles and Conflict of Interests* (2019, 2020), *Winter School for Doctoral Candidates and Young Researchers* (2020), *Doctoral Supervision* (2020), *Researchers' Night* (2020) and others.

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to stimulate researchers' sensitivity to conflict of interest:

Rekomendacijos mokslo ir studijų institucijoms dėl akademinės etikos kodeksų rengimo, priėmimo ir įgyvendinimo [in English: Recommendations on the Adaptation and Implementation of Academic Ethics Codes by Research and Higher Education Institutions], approved on 25 August 2020 [available only in Lithuanian; https://etikostarnyba.lt/wp-content/uploads/2020/08/V-38.pdf]

Tauginienė, L., Cibulskienė, J., Berkmanas, T., Janutėnienė, J., Braziulienė, A., Kazlauskaitė, R., Kližentis, V., Toleikienė, R., Zamokas, G., Sipavičienė, S., Vaičaitis, V. ir Marozas, V. 2019. Publikavimo etika: gairės. Vilnius: Lietuvos universitetų rektorių konferencija, https://lurk.lt/index.php/dokumentai/publikavimo-etika/publikavimo-etikos-gaires/

Training delivered by the Office of the Ombudsperson for Academic Ethics and Procedures, such as *Doctoral Supervision: Roles and Conflict of Interests* (2019, 2020), *Winter School for Doctoral Candidates and Young Researchers* (2020), *Doctoral Supervision* (2020), *Researchers' Night* (2020) and others.

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to stimulate researchers' vigilance over potential consequences of R&D activities:

> *CHAIRMAN OF THE RESEARCH COUNCIL OF LITHUANIA ORDER ON THE APPROVAL OF THE GENERAL RULES OF THE RESEARCH COUNCIL OF LITHUANIA FOR THE COMPETITIVE FUNDING OF RESEARCH AND DISSEMINATION PROJECTS April 4, 2019, No. V-176*
> *CHAIRMAN OF THE RESEARCH COUNCIL OF LITHUANIA ORDER ON THE APPROVAL OF THE DESCRIPTION OF THE PROCEDURE OF THE EXPERT EVALUATION OF PROJECTS AND THEIR REPORTS January 29, 2018, V-43*

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to stimulate researchers' vigilance over potential consequences of technical applications:

> Training delivered by the Office of the Ombudsperson for Academic Ethics and Procedures, such as *Doctoral Supervision: Roles and Conflict of Interests* (2019, 2020), *Winter School for Doctoral Candidates and Young Researchers* (2020), *Doctoral Supervision* (2020), *Researchers' Night* (2020) and others.

Evidence Available for Research Staff at Research Performing Organisations

8.1 Regulations Impacting on Research

Codes of ethics in each higher education and research institution.

8.2 Ethics Infrastructure

Responsible Research Barometer: report (English from p. 25, https://etikostarnyba.lt/wp-content/uploads/2020/08/Atsakingo-mokslo-barometras-2020-tyrimo-ataskaita_LT_EN.pdf)

Evidence Available for Public Perspectives on Science and Scientific Researchers

8.1 Regulations Impacting on Research

No evidence available from existing sources.

8.2 Ethics Infrastructure

The following question and its answers, extracted from the surveys mentioned in the Data Sources section, assess the public perception of the ethical side of science and scientists. Responses indicate public perceptions of progress in establishing the professional integrity of scientists and their work.

Question #13 from the WGM survey 2018 evaluates how much does the public trust scientists to find out accurate information about the world. This question not only indicates a level of trust on scientists, but also in their methods. **45% of the people indicated trusting scientists to find out accurate information about the world to some extent. 30% expressed trusting in them completely, while 6% specified that their level of trust in them is low. Only 3% indicated not trusting in them at all.**[108]

Figure 34: Question #13 from the Wellcome Global Monitor Survey 2018
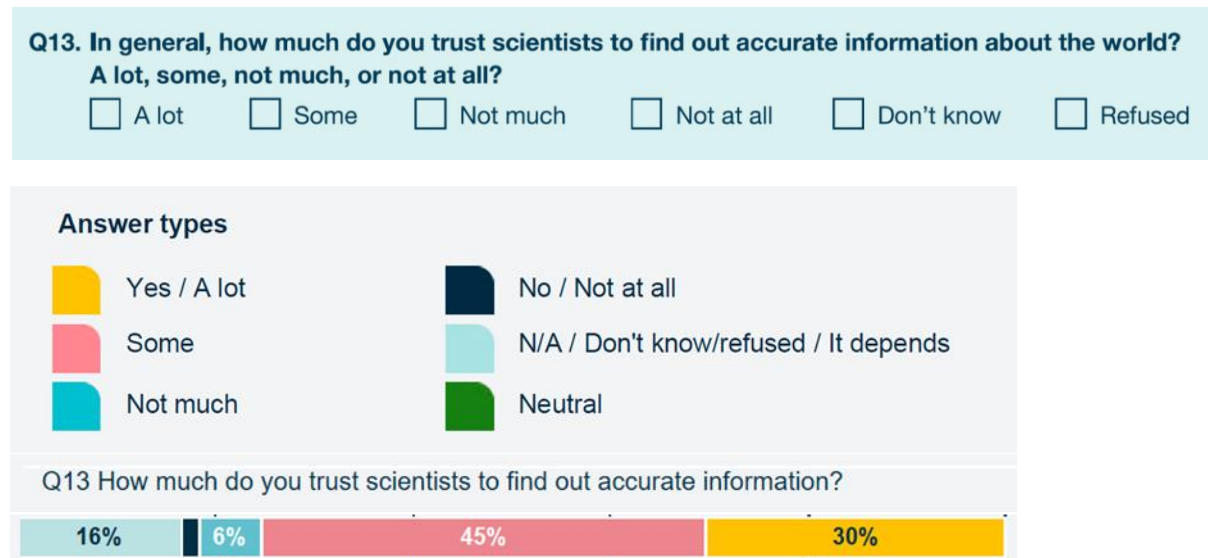
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9 Human Capital for Research

Human capital is the principal pillar of a sound science system. Member States should develop policies with respect to the training, employment, career prospects, and work conditions of scientific researchers. These policies should address, inter alia, adequate career development prospects; lifelong learning opportunities; the facilitation of mobility and international travel; the protection of health and social security; and inclusive and transparent performance appraisal systems for scientific researchers.

The below topics refer to science in society grouped by the Key Priority Area 9

(a) have measures been taken to implement the norms and standards of the Recommendation?

(b) have any obstacles to compliance with the norms and standards been encountered?

9. Human Capital for Research

	(a)	(b)
9.1 Careers, Mobility	Yes/No	Yes/No
9.2 Learning	Yes/No	Yes/No
9.3 International Travel	Yes/No	Yes/No
9.4 Social Security	Yes/No	Yes/No
9.5 Appraisal	Yes/No	Yes/No

Evidence Available for Member States

9.1 Careers, Mobility

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop policies that address adequate career development prospects, lifelong learning opportunities, the facilitation of mobility and international travel, the protection of health and social security, and inclusive and transparent performance appraisal systems for scientific researchers:

The Research Council of Lithuania raising scientific excellence in stages.

9.2 Learning

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop policies that address adequate career development prospects, lifelong learning opportunities, the facilitation of mobility and international travel, the protection of health and social security, and inclusive and transparent performance appraisal systems for scientific researchers:

The Research Council of Lithuania raising scientific excellence in stages.

9.3 International Travel

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop policies that address adequate career development prospects, lifelong learning opportunities, the facilitation of mobility and international travel, the protection of health and social security, and inclusive and transparent performance appraisal systems for scientific researchers:

The Research Council of Lithuania raising scientific excellence in stages.

9.4 Social Security

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop policies that address adequate career development prospects, lifelong learning opportunities, the facilitation of mobility and international travel, the protection of health and social security, and inclusive and transparent performance appraisal systems for scientific researchers:

The Research Council of Lithuania raising scientific excellence in stages.

9.5 Appraisal

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to develop policies that address adequate career development prospects, lifelong learning opportunities, the facilitation of

mobility and international travel, the protection of health and social security, and inclusive and transparent performance appraisal systems for scientific researchers:

The Research Council of Lithuania raising scientific excellence in stages.

Evidence Available for Research Staff at Research Performing Organisations

9.1 Careers, Mobility

No evidence available from existing sources.

9.2 Learning

No evidence available from existing sources.

9.3 International Travel

No evidence available from existing sources.

9.4 Social Security

No evidence available from existing sources.

9.5 Appraisal

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

9.1 Careers, Mobility

No evidence available from existing sources.

9.2 Learning

No evidence available from existing sources.

9.3 International Travel

No evidence available from existing sources.

9.4 Social Security

No evidence available from existing sources.

9.5 Appraisal

No evidence available from existing sources.

10   Enabling Environment for Science and Research

> *Member States – government and non-government stakeholders alike - should create a stimulating environment for a sound science system with adequate human and institutional capacities, by facilitating satisfactory work conditions, moral support, and public recognition of successful performance of scientific researchers; by supporting education in science and technology; by promoting publishing and sharing data and results that meet adequate quality standards; and by monitoring the implementation and impact of such efforts.*

The below topics refer to science in society grouped by the Key Priority Area 10

    (a) have measures been taken to implement the norms and standards of the Recommendation?

    (b) have any obstacles to compliance with the norms and standards been encountered?

10.   Enabling Environment for Science and Research

	(a)	(b)
10.1 Infrastructure and S&T services	Yes/No	Yes/No
10.2 Public funding	Yes/No	Yes/No
10.3 Work Conditions	Yes/No	Yes/No
10.4 Publication	Yes/No	Yes/No

Evidence Available for Member States

10.1 Infrastructure and S&T services

No evidence available from existing sources.

10.2 Public funding

No evidence available from existing sources.

10.3 Work Conditions

No evidence available from existing sources.

10.4 Publication

This is the policy measure reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to promote quality research publishing:

Law on Copyright and Related Rights, https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/5d10f130b83f11e5be9bf78e07ed6470?positionInSearchResults=0&searchModelUUID=386d7301-f6ea-49d8-bd2d-8fc063302916

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to promote sharing research data in a way that meets adequate quality standards:

Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania)

Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funded under Erasmus+ programme) – development of guidelines on research integrity in citizen science is envisaged

These are the policy measures reported by the working group assembled by the Lithuanian Research Council to implement the recommendation to promote sharing research results in a way that meets adequate quality standards:

Ongoing project "Piliečių mokslas kaip inovatyvi piliečių dalyvavimo forma kuriant gerovės visuomenę" (CS4Welfare) (coordinated by Kaunas University of Technology) (funded by the Research Council of Lithuania)

Ongoing project "Bridging Integrity in Higher Education, Business and Society" (coordinated by Uppsala University, Sweden with two Lithuanian and other international partners) (funded under Erasmus+ programme) – development of guidelines on research integrity in citizen science is envisaged

Evidence Available for Research Staff at Research Performing Organisations

10.1 Infrastructure and S&T services

No evidence available from existing sources.

10.2 Public funding

No evidence available from existing sources.

10.3 Work Conditions

No evidence available from existing sources.

10.4 Publication

No evidence available from existing sources.

Evidence Available for Public Perspectives on Science and Scientific Researchers

10.1 Infrastructure and S&T services

The following questions and their answers, extracted from the surveys mentioned in the Data Sources section, assess whether the general public has had access to scientific knowledge at different types and levels of school. The results from these questions are an indicator of progress in member states – government and non-government stakeholders alike- supporting and stimulating an environment in which science and technology can flourish.

Question #5 from the WGM survey 2018 evaluates whether the public has learned about science at primary, secondary and/or college/university. This question is of vital importance to understand potential gaps in science curricula within a country's education system.

55% of the people indicated learning about science at primary school, 72% at secondary school and 29% at college/university. 26% of the people indicated not having learned about science at primary school, 17% at secondary school and 35% at college/university.
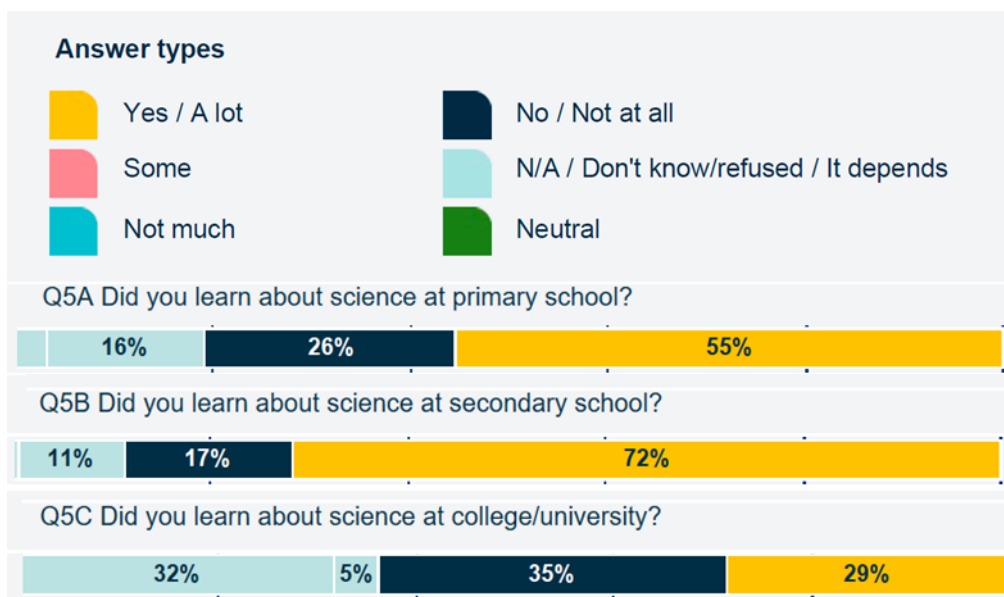
Figure 35: Question #5 from the Wellcome Global Monitor Survey 2018

Q5. **Have you, personally, ever, learned about science at _____ ?**

a. **Primary school:**
☐ Yes   ☐ No   ☐ Never attended this type of school   ☐ Don't know   ☐ Refused

b. **Secondary school:**
☐ Yes   ☐ No   ☐ Never attended this type of school   ☐ Don't know   ☐ Refused

c. **College/university:**
☐ Yes   ☐ No   ☐ Never attended this type of school   ☐ Don't know   ☐ Refused

Answer types

🟨 Yes / A lot	⬛ No / Not at all
🟥 Some	🟦 N/A / Don't know/refused / It depends
🟦 Not much	🟩 Neutral

Q5A Did you learn about science at primary school?
16%   26%   55%

Q5B Did you learn about science at secondary school?
11%   17%   72%

Q5C Did you learn about science at college/university?
32%   5%   35%   29%

10.2 Public funding

No evidence available from existing sources.

10.3 Work Conditions

No evidence available from existing sources.

10.4 Publication

No evidence available from existing sources.