



This policy brief provides insight into

- The concept of Responsible Research and Innovation (RRI)
- The relevance for RRI in Bulgaria
- The RRI-Practice project

### The RRI-Practice project

The main aim of RRI-Practice is to analyse RRI related discourses and pathways to implementation, including barriers and drivers, in 22 research conducting and research funding organisations, in 12 European and non-European countries, in order to identify, understand, disseminate and promote RRI implementation best practices that can be scaled up at European and global levels.

The Bulgarian case study has included the Applied Research and Communications Fund (ARC Fund), the Ministry of Education and Science (MES) and the National Science Fund (NSF). The objective was to examine how RRI is understood and implemented in practice in these organisations. The case study consisted of document analysis, expert workshops, interviews and focus groups.

The project is funded by the European Commission, in the period 2016 – 2019

### Interpretations of RRI

The European Commission emphasises five policy keys for RRI: ethics, gender, open access, societal engagement and science education (see <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation>).

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## POLICY BRIEF

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Responsible research and innovation (RRI) has emerged in recent years, especially in Europe, as a science policy framework that seeks to achieve a) engaged publics and responsible actors in the science and innovation field; and b) ethically acceptable, sustainable and socially desirable research and innovation outcomes that are aligned with societal needs and challenges.

In February 2017, the ARC Fund organised a workshop with 18 stakeholders from the Bulgarian research and innovation system. Discussions on the workshop showed that decision makers, business/industry representatives, and NGOs and science/research actors make up three stakeholder groups with rather distinct opinions on RRI, which is a relatively new concept for Bulgaria. These three clusters of views can be named actor responsibilities, impact/socio-economic relevance of R&I, and industry participation/corporate-social responsibility.

The Bulgarian case study has established that individual RRI keys are well incorporated into the research practice in the country, but the overall RRI concept is largely unknown outside the group of policy-makers and researchers with deeper familiarity and experience with the EU funding programmes. The notion of responsibility in science and innovation is most often interpreted through issues of the social relevance and impact of scientific research, debates on ethics and institutionalisation of ethical norms (ethics commissions, codes of conduct for research integrity), initiatives to promote open science and open access policies, and increased attention to different methods for societal engagement.

The following conclusions can be made about how individual RRI keys are perceived in the Bulgarian R&I context:

*Ethics* is related to research integrity and 'proper' scientific conduct (honesty, reliability, respect, non-biased public communication of science, full transparency and accountability of research activities and research outcomes). Ethics should be formalised through Codes of Conduct and establishment of Ethics Commissions.

*Societal engagement* is understood by policy-makers mainly as a tool for increasing the public trust in science and for legitimising public R&I spending, while researchers see it as an innovative method for engaging society in the process of defining research priorities.

*Gender equality* in R&I is frequently dismissed as a non-issue for the Bulgarian context with an explanation that there are more women than men in the public research sector and that many women occupy top managerial positions in public R&I organisations.

*Open access* is an important priority in the Bulgarian science system and in recent years, different steps were taken to encourage researchers to provide access to results of publically-funded research and thus improve the open access performance of the country.

The importance of *science education* is recognised by universities and research institutes and promoted through various initiatives of public institutions like the Ministry of Education and Science, but overall implementation is hindered by insufficient financial resources.



Quotes from the Bulgarian case study:

*“Seeking applicability in terms of delivering broader social value, to do with solving important issues that people can relate to, is what I tend to think of when trying to justify a responsible approach to research.”*  
(ARC Fund mid-level manager)

*“Actors in the field of science should actively seek to be part of societal advancement, informed by societal needs, expectations and ethical concerns when deciding on research focus and designing their research methodologies. On the other hand, they should also promote wider public’s interest in scientific issues as this is how science and society can be brought closer together in solving societal challenges.”* (ARC Fund expert)

*“Scientists deserve societal attention and support through public funding because they are indeed innovators and discoverers who contribute to society’s safety, wellbeing and development by providing solutions to problems related to demographic, economic, legislative and practical/daily life domain.”* (MES high level policy-maker)

*“Main goal is to change the mind-set of the scientific community towards openness, inclusiveness and ethics in regard to science and all this - in the context of scientific research in service to society via scientific solutions to most pressing societal challenges.”*  
(Senior official at MES)

In the research funding organisations (MES and NSF), responsibility is perceived as a need to address societal challenges and provide solutions to pressing social needs. This would mean that the funding priority should be given to research performing institutions, which produce results that are useful to society. Responsibility is also associated with accountability and an open and honest dialogue between all stakeholders involved in the research and innovation system. In the research performing organisation (ARC Fund), responsibility is embedded in the principles of good governance, financial accountability, adherence to high ethical and professional standards, commitment to public accountability, openness and collaboration, efficient management of resources, operational and financial autonomy, equitable and transparent stakeholder engagement, and moral integrity.

Based on the findings of the case study, several recommendations can be made:

a) to the Bulgarian policy makers

- Continuous development of ethics standards and adoption of National Code of Conduct for researchers
- Expansion of channels and capacity building for communication with the public on issues of science, research and innovation
- Promotion of gender equality and non-discrimination awareness and removal of barriers to career progress of women in science and research
- Improvement of capacity and knowledge about open access and establishment of new open access repositories
- Training and appointment of science education specialists in research projects

b) to the EU policy makers

- Improved policy instruments and better targeted funding for RRI implementation through the Operational and Framework Programmes
- Integration of RRI into evaluation criteria for supporting project proposals
- Better awareness about RRI matters through more effective information dissemination and access to information
- Introduction of Governance as a key pillar
- Expand the “gender equality” key, which is too narrow, to include other socio-demographic characteristics to promote and improve diversity in science, research and innovation

Several good practices of societal and stakeholder engagement were identified in the course of the study. These are the wider stakeholder participation in the work on preparation of the Innovation Strategy for Smart Specialisation and on establishment of the Regional Research Centres through the OP Science and Education for Smart Growth (practices implemented by MES), and the innovative for the country initiatives for developing a more inclusive, responsive and responsible research and innovation system through citizen vision workshops (undertaken by ARC Fund in projects like CASI – <http://www.casi2020.eu> and PROSO – <http://www.proso-project.eu>).

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The RRI-Practice consortium

