

Science, Technology and Innovation Policy Program

ARC Fund's work in the area of Science, Technology and Innovation Policy (STIP) facilitates public, multi-actor deliberative processes on societal challenges stemming from research and innovation. It mobilizes actors from civil society, business, university and research organizations, as well as policy and decision-makers, towards a shared understanding of forthcoming transformations and challenges in technological developments and innovations, and steers them towards a shared vision for the integration of responsible research and innovation principles into science and policy-making. Despite significant disruptions due to COVID-19, in 2020 the ARC Fund managed to:

- conduct an exploratory analysis of how the precautionary principle has influenced the development of the regulatory framework of GMOs in Bulgaria, with a particular focus on the Parliamentary debates on the Law on Genetically Modified Organisms.
- further integrate principles of Responsible Research and Innovation (RRI) on an organizational level, as well as on territorial policy level, by enabling territorial actors to develop decision systems based on responsibility, anticipation and inclusivity.
- contribute to the development of a Code of Ethics with a repository of good practices in Research and Innovation.
- enhance significantly its participation in the Horizon 2020 Program, strengthening its national standing as the most productive non-profit research organization in the EU's largest R&I funding program, and expand its network of partnerships across Europe.

Leadership in Responsible Research and Innovation

ARC Fund has been working actively to promote and integrate Responsible Research and Innovation (RRI) and establish it as a guiding principle of Bulgarian R&I and funding organizations.

Striving to become an RRI champion in Bulgaria and the EU, in 2020 ARC Fund joined the ETHNA System – an international initiative involving universities and research institutes from eight European countries (Austria, Bulgaria, Denmark, Estonia, Germany, Portugal, Spain and Norway). Its main aim is to develop and implement an ethics governance system for grounding good RRI practices in higher education institutions, research and innovation funding bodies, and research centers. A special organizational structure named ETHNA Office will be set up and tested by the ARC Fund. The four main instruments of the ETHNA Office are the Code of Ethics with a repository of good practices in research and innovation, the

Ethics Committee of Research and Innovation, the Ethical Hotline, and indicators for monitoring the progress in the RRI institutionalization. These instruments will support the RRI uptake by providing guidelines and offering tools for management of RRI policies and actions in the organization.

Throughout 2020, ARC Fund also contributed to promoting RRI-based practices on a local and regional level. It continued partnering with the Municipality of Gabrovo in the design of a novel approach to territorial public decision-making process by facilitating cross-actor collaborations among territorial R&I actors. It provided methodological support in the design and preparation of a guided process of reiterative consultation of local actors, including citizens, thus strengthening the exchanges among citizens, researchers, local businesses and policy-makers.

The precautionary principle – reconciling science, public concerns and policy-making through stakeholder consultation and mobilization

The *precautionary principle* allows regulatory oversight over scientific and technological developments, whose practical applications are frequently the source of public concern or are believed to cause harm to human health or the environment. Decision-makers invoke this principle with respect to identified hazards without a certain proven cause coupled with high stakes.

Throughout 2020, ARC Fund worked on a comprehensive [case study](#) on the relevance of the precautionary principle to the governance of GMOs. The research focused on the evolution in the Bulgarian parliamentary debates on the *Law on Genetically Modified*

Organisms since its initial adoption in 2005, reviewing a range of opinions and motives expressed by MPs, government officials and experts in plenary, as well as in relevant Committee meetings. The case followed the debates during major amendments to the law and provided an example of how strong precautionary thinking (i.e. assuming the highest threat and damage probability) can shape regulatory oversight. It further highlighted the complexities in creating and enforcing any regulation marked by scientific uncertainty, technological complexity and public distrust, as well as the challenges in the dialogue between scientists, policy-makers and the general public.

Transforming Energy Consumption Patterns in Households

In 2020, ARC Fund continued to encourage efficient and more environmentally

conscious energy consumption among households in Europe. Built as an open ac-

cess e-learning platform, ACT4ECO helps European consumers learn more about the different aspects of efficient energy consumption. Specific themes include how to produce one's own energy, how to better manage one's energy consumption, how to improve the energy efficiency of one's home, how to be a smart energy consumer and how to sustain efficient energy use in the long-term. The platform was pilot-tested in mid-2020 and was made fully operational in October 2020.

ARC Fund became part of three international initiatives, contributing to increasing its visibility as an advocate in the field of responsible energy consumption and energy efficiency. Together with eight other partner organizations that participated in

the development of the ACT4ECO platform, ARC Fund marked the EU Sustainable Energy Week (June 2020), the World Ozone Day (September 2020) and the EU Regions Week/Green Europe (October 2020). Two of the events – EU Sustainable Energy Week and EU Regions Week/Green Europe were used as an opportunity to raise households' awareness about the importance of sustainable energy consumption by promoting the diverse actions and measures accessible on the platform. To honor World Ozone Day, ARC Fund and its partner organizations held a webinar to discuss with a representative of the United Nations Environment Program (UNEP) the relation between the ozone layer and climate change, as well as the importance of user awareness and action for ozone layer restoration.



*The Act4Eco platform presented during the World Ozone Day,
16 September 2020*

To contribute to building an informed community of users with a sustained interest in the topic of energy efficiency, ARC Fund created and has been managing a dedicated group on Facebook, where articles on the topic of sustainable energy consumption are posted regularly, engaging users in open dialogues and shared learning. ARC

Fund organized a number of successful promotional campaigns, such as ACT4ECO Ambassadors and #ISaveEnergyBecause, aiming to inspire group members to actively support the transitioning to more sustainable energy consumption patterns in European households.