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Technology Assessment in a Globalized World

Facing the Challenges of Transnational Technology Governance

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Appendix: Chapter on

TA activities in Central Europe (Poland, Czechia, Slovakia), pp. 244-248

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Central Europe: Specific Context

Of the three Central European countries in this section, **Poland** has advanced Technology Assessment (TA) activities the most and succeeded in establishing a parliamentary TA office. Czechia (Czech Republic) and Slovakia actively participate in (mostly European) TA projects, but are struggling to establish solid TA institutions formally recognized by national government (either executive or legislative branch). Historically, the scientific community interested in the problems of TA began to form in Poland as early as the 1970s. For instance, the works of Prof. Lech Zacher, a precursor of research and publications in this field, became relevant. After the first period of functioning as a loose group of scientists, this community found its institutional framework. Currently, the two leading institutions dealing with the issues of technical assistance in Poland are:

- The Bureau of Research of the Polish Parliament (*Biuro Analiz Sejmowych*, BAS¹), established in 1991. BAS is the leading national institution specializing in legislative aspects of TA. It is the organizational unit of the Chancellery of the Polish Parliament (Sejm) which provides research and analytical support to the lower chamber of the Sejm. The main task of BAS is to draft legal opinions, prepare independent reports, and work out analyses upon request from individual MPs and parliamentary committees. Activities of BAS cover a broad spectrum of constitutional and legal matters, EU legislation, social and economic issues, and TA. BAS is also the associated member of the EPTA network.
- The Polish Association for Technology Assessment (*Polskie Towarzystwo Oceny Technologii*, PTOT²), registered in 2015. PTOT deals with TA from a scientific perspective. This organization

¹ http://www.bas.sejm.gov.pl/about_us.php

² <http://www.ptot.pl>

aims to develop and popularize TA as a form of interdisciplinary scientific advice for broadly understood public policy. Members of PTOT are developing novel concepts for TA and improving research methods and tools used in TA. They are working to integrate scientific communities around the idea of TA, and integration of competencies dispersed in various scientific disciplines. A recent brainchild of this activity is the Center for Science and Technology Assessment (*Centrum Oceny Nauki i Techniki*, CONT), which has been established at the John Paul II Catholic University of Lublin, and which will be dedicated to the axiological dimension of science and technology in Polish society and internationally.

Czechia does not have an established institution dedicated solely to TA. Czech research teams were actively involved in European TA projects (e.g., TAMI and INES³) for the first time in 2002. The Technology Centre of the Czech Academy of Sciences (TC CAS⁴), which is a leading national institution specializing in analytical and conceptual activities oriented at the area of STI, can be regarded as the 'TA institution' in Czechia. The TC Department of Strategic Studies (STRAST⁵) systematically develops methodologies for strategic studies and utilizes the latest findings in this field to prepare conceptual background materials for the public administration on the European, national, and regional levels. STRAST identifies research priorities and/or evaluates results and impacts of implemented policies. STRAST also develops methodologies used for its activities, such as evaluation, technology and impact assessment, foresight, or public engagement. In this context, TC CAS has been involved in UNIDO, ETAG, globalTA, as well as the Europe's People's Forum (EPF) networks and has become an observer in EPTA.

Similarly, to Czechia, there is no proper TA institution in **Slovakia**. There has been some positive development regarding Health Technology Assessment (HTA), which can be regarded as a TA sister discipline, with the establishment of a national HTA organization at the Ministry of Health⁶ but there is no similar development on the front of TA as such. Still, the Slovak Academy of Sciences (*Slovenská akadémia vied*, SAV⁷) can be considered as an aspiring TA institution in Slovakia. In 2013, some of the first openly TA activities were in place, as the SAV Institute for Research in Social Communication started working on two projects dedicated to nuclear energy and human enhancement technologies. Furthermore, based on the guidelines of the European Academies Science Advisory Council (EASAC): Good Practice in the Dialogue between Science Academies and Policy Communities, SAV established a Science Advisory Platform in April 2016, became an observer in the EPTA network in the same year, and later also joined the globalTA network at the 4th European Technology Assessment Conference organized in Bratislava in 2019⁸. Generally, SAV is mostly involved in joint projects with other European TA institution, e.g., within the EU Framework Programme. Stemming from the support of the international network of partners, SAV

³ <http://salinitygradientpower.eu/what-is-the-ines-project-about>

⁴ <https://www.tc.cz/en>

⁵ <https://www.strast.cz/en>

⁶ Tesar et al. (2017)

⁷ <https://www.sav.sk/?lang=en>

⁸ <https://bratislava2019.technology-assessment.info>

is continuously working to advocate for TA activities in Slovakia, yet it lacks adequate resources both in human capital and funding in order to build an institutionally stable TA institution.

Central Europe: Highlights of TA Activities

A typical TA activity in the region of Central Europe is an international project involving citizen engagement (such as PACITA⁹ and CIMULACT¹⁰). Secondly, there is good practice of science-policy interface regarding TA topics, with different levels of institutionalization among countries.

In **Poland**, BAS and PTOT both participated in European projects such as PACITA, actively testing various participatory TA methods for STI knowledge-based policymaking. Currently, there are national and international research projects dedicated to:

- **Educational needs of TA from the Polish perspective.** This research aims to investigate the implications of the paradigm of TA at universities of technology. While pedagogical thinking in research has traditionally emphasized the issues of teaching about technology, reviewing it in the light of current empirical developments shows a niche in theories concerning TA in education.
- **Future-oriented TA as a support tool for Responsible Research and Innovation (RRI).** As part of the research, the methods and techniques used in enterprises will be analyzed to reflect on the possible consequences of developing a given innovation at the design stage and generate practical, ethically acceptable, and socially acceptable desirable results.
- **The social perception of 5G technology.** The project aims to show how people perceive modern technologies, especially 5G technology, in the context of social security and opportunities and risks in social development. The theoretical model of the project refers to such theoretical positions in general sociology and TA, as well as in sociological research, which situate humans in the broader technological context of the information age or more broadly postulated Society 5.0.

In **Czechia**, TC CAS has participated in European Framework Program projects such as PACITA, CIMULACT, and GoNano¹¹. Currently, it also works on NMP newcomers' better involvement within a TA-like participatory project FIT-4-NMP¹². TC CAS actively contributes to EPF activities for the Conference on the Future of Europe. Recently, TC CAS has finished a national project called RedPot (Reduction of Food Waste in Catering)¹³, where part of the project was to discuss and assess emerging technologies in catering for food waste reduction. Results have been further used not only by the relevant ministries (of agriculture and environment), but also by some active fast food and catering chains like Hellman's, Compass Group and Subway, as a practical guide for their employees all over Europe.

⁹ <http://www.pacitaproject.eu>

¹⁰ <http://www.cimulact.eu>

¹¹ <http://gonano-project.eu>

¹² <https://www.fit-4-nmp.eu>

¹³ <https://redpot.strast.cz/en/documents>

Several projects that SAV implemented in **Slovakia** dealt with citizen engagement activities. European Framework Program projects include PLATENSO¹⁴ (citizen consultation on nuclear energy), CIMULACT (citizen consultation on research funding), and Human Brain Project¹⁵ (citizen consultation on artificial intelligence (AI)). Some SAV projects also dealt with ethical dimensions of TA in relation to citizen engagement. Slovak Research and Development Agency funded a project (NBICET), which tackled ethical aspects of nanotechnology, biotechnology, information technology, and cognitive sciences. Within the SUPER MoRRI¹⁶ project, an analysis of RRI elements, including citizen engagement, has been made. To encourage public debate in Poland, BAS produces a few publications covering subjects related to current and forthcoming legislation and other matters of public concern. The Bureau publishes a series of short briefing notes ('Infos') containing concise 4-page analyses of current social and economic issues. Research reports are published in the quarterly 'Studia BAS.' BAS assists the Sejm and its committees by organizing seminars and conferences on a wide range of topics. Another role of the Bureau is to monitor the consequences of current and future trends in technology development.

In **Czechia**, TC CAS involvement in European TA projects has brought a significant change in the way society and policymakers perceive TA, participation, and public engagement, as these methods and principles are more and more visible in the basic STI/RDI policy strategies and programs. In line with this, TC CAS hosted the 1st European Technology Assessment Conference in Prague in 2013.

Since 2016 in **Slovakia**, SAV has been involved in the Science meets Parliament's initiative organized by the Joint Research Centre of the European Commission. Due to a fruitful cooperation with the Parliamentary Committee for Education, three panel discussions have been organized in the Parliament so far, on topics such as quality of education, institutionalization of TA, transnational labor mobility, and industry 4.0. As continuation of these activities, together with the Parliamentary Committee for Education, SAV organized the 4th European TA Conference titled 'Value-driven Technologies: Methods, Limits, and Prospects for Governing Innovations' in Bratislava in 2019. At this conference, the globalTA network was launched and its 1st annual meeting took place.

Central Europe: Specific Challenges and Outlook

Typical for these three Central European countries is that, even though there are several institutions which carry out foresight activities, create scenarios, evaluate risks, and assess impacts on the environment and society, etc., these activities are often not coordinated, and the individual institutions rarely cooperate with each other. The best circumstances are in Poland, where, besides the Bureau of Research of the Polish Parliament, TA is actively developed primarily in academic fields, and PTOT is an organization that tries to unify all these different initiatives. In Czechia and Slovakia, the problem lies in the fact that TA activities are mainly carried out within individual (and mostly international) projects, and there are limited provisions for their continuity. Even though TA is actively used as a concept and tool for knowledge-based policymaking in both countries, TA is still not institutionalized in one organization within the government (neither for the executive nor legislative branch) which could support TA both in organizational and financial aspects. This can be considered as

¹⁴ <https://cordis.europa.eu/project/id/605140>

¹⁵ <https://www.humanbrainproject.eu/en>

¹⁶ <https://super-morri.eu>

a challenge in order to reach a common understanding of the use of TA for policymaking on a regular basis and not only as an ad hoc tool. This also means that the international network of partners is crucial, especially for these two countries. Initiatives and platforms such as the globalTA network provide a ground for TA in Central Europe, even though nationally its roots are not very deep in some countries. This global connection can be used as leverage in advocating for more TA activities in the region.