

Recommendations of the Regional Workshop on Science Academies in Central and Eastern Europe and their Role in Knowledge-Based Society

July 2012

The National Academy of Sciences of Belarus and the IAP, the global network of science academies, jointly organized a regional Workshop on Science Academies in Central and Eastern Europe and their role in knowledge-based Society. The workshop, held at the National Academy of Sciences of Belarus in Minsk (Belarus) on 11-12 June 2012, brought together 23 participants from 10 countries representing the Region of Central and Eastern Europe to discuss common regional issues and challenges of Academy organizations. Sessions addressed topics such as Academy and Knowledge-based Society, Academy and Excellence, Academy and Youth, Academy and Regional Challenges, Academy and Policy Advice.

The workshop included representatives from some regional Academies of the countries, which can be classified as belonging to different groups. The first group consisted of Ukraine, Belarus and Latvia, the countries which arose after the breakdown of the Soviet Union. The second one was the neighboring countries of Belarus under Soviet Union, which are in the EU now, namely Poland, Czech Republic, and Romania; the third participant was the South Balkan country of Montenegro; the fourth group included the representatives of the Western Europe, like the Netherlands and Germany, together with Poland, Czech Republic, Romania and Latvia member states of the European Union. Besides them, a representative of the European Commission took part in the Workshop.

There are two systems of organization of academic science – as a centralized self-government body specializing in research activities and as associations of scholars

The workshop brought us to the conclusion that despite the many local differences in historical development, resources and staff Academies across Central and Eastern Europe actually play similar roles and face many common challenges. These include the need of engaging youth in academy activities, of effectively communicating science and of interacting with decision makers. Some Academies made attempts to diversify their fellowship. Focusing on key outcomes of the discussions among participants, several conclusions were drawn to guide potential “next steps”. These are listed below.

Recommendations:

- This Workshop held under the auspices of the Global Network of Science Academies (IAP) is a first attempt to integrate the Academies of Sciences of Central and Eastern Europe into the IAP collaboration framework, and has played a coordinating role in expanding links between the academies of the region and launching the different projects on science communication.

- Academies need to promote science education as early as in primary and secondary education, for example, by creating scientific groups for school children within Academy institutions. Examples of the best practice in this area exist and could be adopted by the other Regional Academies.
- Special attention should be paid to the development of links between young scientists of regional Academies, with the aim to increase their interests towards the improvement of their professional skills by stimulating them to apply for international grants, as well as to exploit other possibilities offered by various scientific bodies. The first step in this process would be systematic gathering and dissemination information on what is currently taking place internationally, and to build on successful initiatives, including dissemination of information on young academies events and activities, with particular attention to the Global Young Academy.
- Some Academies are facing the challenges in engaging discussions with decision makers. All Academies should invite policy-makers to participate in their events, as well as informing them of their ongoing activities.
- Academies, together with their own and other scientific institutes, share the challenge of defining the most current and valid indicators of true excellence. Care must be taken to ensure that the “right” factors are being controlled.
- Academies should endeavor to be a close part of society with recognized authority to give advice to citizens, public officials and policy-makers regarding the state-of-the art and modern trends in different directions of science, education, national economies and also on the scientific aspects of critical global issues.
- There are currently different understandings of the priorities of individual academies in Central and Eastern Europe. Nevertheless, these differences can be a basis for establishing a long-term cooperation for interchange of experience with the aim of helping to solve the coming regional challenge.

Overview of the workshop and report structure

The Workshop on Science Academies in the Central and Eastern Europe and their role in knowledge-based Society was one-and-a-half-day event divided into six sessions. Each session had one invited report and two to four panel presentations, followed by a moderate discussion period. The report below is an overview of the highlights, main conclusions and recommendations from each session.

About the IAP, the global network of science academies

IAP is a global network of the world science academies, launched in 1993. Its primary goal is to help member academies to work together to advice citizens and public officials on the scientific aspects of critical global issues. IAP is particularly interested in assisting young and small academies to achieve these goals. Through the communication links and networks created by IAP activities all academies will be able to raise both their public profile among citizens and their influence among policy makers.

About the National Academy of Sciences of Belarus

The National Academy of Sciences of Belarus was founded in October 1928. The National Academy of Sciences of Belarus is the highest state scientific organization of the Republic of Belarus, responsible for coordination of fundamental and applied research performed by all subjects of scientific activities in this country, provides fundamental and applied research and developments in the main fields of natural, engineering, social sciences, humanities and arts to obtain new knowledge of human, society, nature and artificial objects that increases the scientific, technical, intellectual and spiritual potential of the Republic of Belarus. The National Academy of Sciences provides the scientific expertise, pursues common state policy in regulation of activities of scientific organizations and universities and according to the Law of the Republic of Belarus "On the National Academy of Sciences of Belarus" and its Statute some functions of a republican body of state management in the field of science.

The National Academy of Sciences of Belarus unites the highly-skilled scientists of different fields and tens of research, scientific-production. The staff of the Academy of Sciences includes about 18,000 researchers, technicians and supporting personnel whose average age is 49 years old. There are about 6,200 Researchers, 501 Doctors of Sciences and 1,915 Candidates of Sciences (equivalent to Ph.D.), 248 Professors and 516 Associate Professors among them working at the Institutes and other scientific organizations.

Session I. Academy and Knowledge-based Society

Moderator: Professor Janush Lipkowski, Ex-Vice-President of the Polish Academy of Sciences, Poland.

Invited Speaker: Professor Janush Lipkowski, Ex-Vice-President of the Polish Academy of Sciences, Poland.

This main introduction of the session provided an overview of a central place of science academies in the world especially in developed countries, an evolution of their roles in societies, the development of the science system in the countries in

close association with other scientific institutions and universities. The peculiarities in Academy structural organization in this region were demonstrated by describing different models such as that associated with research institutions or presented by separated bodies uniting the leading scientists in the fields of a definite country. In some countries the special Foundation for Basic Research was set up, for example, in Russia, Ukraine and Belarus to promote basic research as an important task of the Academies of Sciences. The role of Academies consists in encouraging public engagement in science and extending scientific knowledge in society and raising the problems of crucial importance for the societies as did Polish Academy of Sciences for International Biosecurity or EASAC for a number of tremendous problems. The crucial statements of Academy Sciences are as follows:

- elections of fellowship (membership) based on scientific merits which represent a personal event of a significant national and international honor;
- the ability of members to compose a different counsel including those at the government level for the questions of national, regional and global importance;
- the ability of the Academy to represent the scientific community of country in international bodies;
- permanent participation of the Academy in the process of higher education and effective activity to increase scientific knowledge of the population in its country.

Session II. Academy and Excellence

Moderator: Professor Miroslav Tůma, Vice-President, Academy of Sciences of Czech Republic.

Invited speaker: Professor Miroslav Tůma, Vice-President, Academy of Sciences of Czech Republic.

The scientific excellence is a requirement for each scientist who strives to be a member of an Academy. It is determined by colleagues, editorial boards of journals, scientific societies etc. by evaluating the level of a research.

The membership is a logical result of evolution of a scientist on his way of qualification growth.

The subject of excellence has become very important in science and development especially during last years since the whole knowledge triangle composed from

science, education and innovation is acquiring more and more global character resulting in much stronger effects to the whole European society. One good example of supporting excellence by the European Community is the program Ideas of the Framework Program 7 (FP7) which attracts also scientists from non-EC countries and other continents to compete for research grants. The excellence may be the only criterion to be successful here but there are also some other examples in FP7 which stress quality as the most important property. An important moment of the activity of each academy is therefore determination of its proper excellence. In case of the Czech Academy of Sciences there is a steady movement in this direction with a strong emphasis on the international dimension of this change.

Session III. Academy and Youth

Moderator: Dr. Alexandru Simon, Romania, Member of Global Youth Academy.

Invited Speaker: Dr. Alexandru Simon, Romania, Member of Global Youth Academy.

According to the polls of Russian sociologists the possibility of career promotion is an important point for the activity of young scientists in Russia and other NIS. No prospects in this question are the main reason for young scientists to change their field of activity or to look for a scientific position in developed countries. Among the factors that attract the youth to academic science are the interesting subjects for research, sensation of personal relevance, experienced colleagues for discussions, good modern installations, good opportunity for skill promotion etc.

A new instrument for young scientists to be united is GYA, the Global Young Academy formed in 2010 by a group of young scientists after participation in the IAP Young Scientists Conferences held in conjunction with the World Economic Forum.

The Global Young Academy focuses on improving Early Scientific Careers, Science-Society Dialogue, Science-Education, and Interdisciplinary Research.

Each academy in the region uses different approaches to promote the young scientific generation. So-called councils of young scientists are very popular in post soviet countries which unite the PhD students and young research workers who recently graduated from universities and higher schools. The councils operate at different levels of activity at the institutions, departments and Presidiums of the Academies in encouraging young elite scientists to promote science. These councils elaborated another approach to work with school children. They organize the circles in scientific trends to attract children to the science, select talented individuals and promote their further professional advance. The regional

Academies are advised to study the experience of GYA and Young Academy of the Netherlands when in use with young scientists.

Session IV. Academy and Regional Challenges

Moderator: Professor Roberta D'Alessandro, member of the Young Academy of the Royal Netherlands Academy of Science and Leiden University, The Netherlands.

Invited Speaker: Professor Roberta D'Alessandro, member of the Young Academy of the Royal Netherlands Academy of Science and Leiden University, The Netherlands.

The European Union has recently outlined an overview of the so-called regional challenges, i.e. the regional responses to the Grand Challenges in view of Horizon 2020. The five Grand Challenges for Europe are globalization, demographic changes, climate change, energy risks and social risks. These challenges will affect the European area in different ways, depending on several factors, such as demography, level of education, development of industry and agriculture of the various countries. Hence, each EU country is called to develop its own strategy to meet these challenges. The European Commission has elaborated a general strategy with the aim of guiding the various countries, and has listed some targets, such as higher employment, innovation, education, social inclusion and more sustainable climate-energy policy. Each of these targets will need to be adapted by the various EU countries, according to their actual socio-political and economic situation. For the countries of Central and Eastern Europe some objectives will be similar to those of southern European countries.

The Academies of Central and Eastern Europe are advised to use the new instruments of the European Commission as Eastern partnership (platform 4) to increase the cooperation among the scientists involving them in ERA. Besides, the European Commission is elaborating different instruments to attract scientists to FP7 to solve important regional problems. For example, EC conducts the collaborative calls to Africa, Mediterranean Partner, Asia, Eastern Europe Countries etc. The EC collaboration with Eastern countries requires to be wider using new appropriate collaborative calls through all priorities).

Session V. Academy and Policy Advice

Moderator: Professor Volker ter Meulen, Germany, European Academies Science Advisory Council.

Invited Speaker: Professor Volker ter Meulen, Germany, European Academies Science Advisory Council.

The role of the Academies in this point of policy advice is impossible to overestimate. They have to serve as reference and guidance for local governments to choose an optimal way for really sustainable socio-economic development. The Academies have to predict what expectations are on this way and to help governments to build a more balanced policy with human being the focus of attention. Overall in Europe countries this approach takes place including Member States and those of Central and Eastern Europe having the Academies of Sciences. It should be noted that we all are witnesses of closer integration of some Academies with governmental activity when the Academy fulfills some tasks incidental to the governmental structures themselves. Some Academies of the region changed structurally and functionally regarding their responsibilities for different questions facing the states. Especially, this is concerned with innovation as it takes place in Belarus. The special attention was also paid to capacity building of advisory work to the policy as it takes place with EASAC which prepared a number of advice reports for governments and societies. Some EASAC proposals will be used during preparation of important international documents like, for example, Horizon 2020.

Conclusions

As follows from the data presented by the participants of this workshop and discussions on the topic of the sessions, the activity of the Science Academies of the Central and Eastern Europe requires strengthening cooperation and experience exchange, elaboration of new instruments to increase their role in appropriate countries responding to the challenges in proper time to give concrete advices for decision and policy makers, dealing with young scientists as future successors of leading scientists to raise their professional skill. All enumerated attempts as main tasks of Academies activity should be undertaken at both the regional and IAP levels. More involvement in IAP activities should be strongly encouraged and welcomed. Regional activities through the bilateral cooperation should also be strengthened. This meeting was seen by the participants as a major step in the right direction which opens the way for more collaborative attempts. Taking into account the presentations and the discussions at each Session the representatives were invited to summarize the main recommendations and were proposed to follow up initiatives.