

Sustainability Science in Central and Eastern Europe

Warszawa Workshop, 11/12 September 2015

organised by the
Polish, German and Austrian National Commissions for UNESCO



co-organised by the
Ministry of Science and Higher Education of the Republic of Poland



and the
Ministry of Foreign Affairs of the Republic of Poland



SUMMARY OF MAIN MESSAGES AND RESULTS

40 scientists and representatives of ministries and other relevant organizations discussed the issue of Sustainability Science in Central and Eastern Europe (CEE) for 2 days in September 2015 in Warsaw, Poland. This discussion resulted in the signature of a “Statement of Commitment” by most scientific participants that shall result in the formation of a research consortium and the submission of a project proposal in the very near future.

Participants reiterated the conceptual consensus on Sustainability Science, reached at a previous workshop in Bratislava in 2014¹. This time, they discussed opportunities that the current context of sustainable development policies and science policies present in CEE, such as a transformation of science policies towards more priority setting, a greater awareness for sustainable development or the adoption of the SDGs. Altogether, there was strong consensus that this context provides promising framework conditions for fostering Sustainability Science in CEE. They agreed on goals, partners and the most important elements of a planned joint research proposal.

¹ See *Summary Statement of the Workshop on Sustainability Science in Central and Eastern Europe*, Bratislava, 17 June 2014: http://www.unesco.de/fileadmin/medien/Dokumente/Wissenschaft/Sustainability_Science_in_CEE-Summary_Statement_Bratislava_workshop_17June2014.pdf (23 September 2015).

Summaries of key note presentations

Transition from environmental protection to sustainable development in Central and Eastern Europe (CEE) - the case of Poland

Prof Dr Maciej Sadowski and Prof Dr Tomasz Winnicki

In CEE, sustainable development is still very much focused on ecological issues, although social concerns grow in importance. Environmental consciousness and the commitment of civil society in the field of environmental protection increase in Poland. However, environmental challenges of sometimes a catastrophic dimension remain in Poland as in all countries of CEE, such as floods and droughts, waste management and GHG emissions which to a great extent are a result of the former centrally planned economy. Poland has responded to these challenges through active participation in regional symposia on environmental protection throughout the 1990s. Furthermore, Poland has actively participated in the European cooperation of Sustainable Development Advisory Councils since the 1990s. And it has established a long-term and a medium-term national development strategy, comprising nine sectoral strategies, of which the one for energy security and environment is most relevant for sustainable development.

Science and the Post 2015-Agenda

Dr Salvatore Aricó

The Sustainable Development Goals (SDGs) of the Agenda 2030 form the new framework for global efforts towards sustainable development, starting with the planned adoption at the UN Summit end of September 2015. The SDGs' key novel aspect is their universality, being applicable both to the developing and to the developed world; the stronger integration and evidence-base are key factors. Science, Technology and Innovation (STI) are not included as a separate goal within the SDGs. However, STI are part of the SDGs at four different levels: at the level of goals and targets (very clearly at least for goals 6, 7, 9, 13, 15, and 17), in the "Declaration"², in the Means of Implementation (MOI, including in the Addis Ababa Action Agenda and its Section on STI and Technology Facilitation Mechanism) and in particular with regard to follow-up, monitoring and review. UNESCO responds to the SDGs inter alia by aligning its priorities with the MOI. The integrated and holistic approach of the SDGs calls for a transformative science agenda which takes into account social, environmental, and economic factors. The integration of the SDGs into national policies can be used as an engine and clear policy enabling framework towards anchoring sustainability science in each country. However, the lack of adequate R&D intensity, economic and political challenges are problematic as it concerns co-design and co-production. The cooperation amongst CEE countries with regard to sustainability science could i.a. be fostered by the establishment of an equivalent to the Belmont Forum, an antenna of Future Earth, GO-SPIN country studies, the momentum of the Budapest World Science Forum and a close cooperation with UNESCO Natural Sciences Sector's sustainability science project.

Overview: Results of the Bratislava Workshop and goal of this workshop

Dr Clemens Mader

The Bratislava Workshop took place on June 15-17, 2014 with more than 40 scientists and representatives of ministries and National Commissions for UNESCO from 8 CEE countries that entered the EU in 2004 plus Austria and Germany as participants. They formulated a joint understanding of the concept of sustainability science, analysed the status quo of sustainability

² See *Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda*: http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E (23 September 2015).

science in the respective science systems and identified current and future networking possibilities. This cooperation is parallel and integrated with other networks such as the “Higher Education Sustainability Initiative” and the “Copernicus Alliance”, and it can link to the Horizon 2020 focus on “responsible research and innovation” (RRI). Building on the success of the Bratislava Workshop, the Warsaw Workshop aims to strengthen sustainability science in CEE through the formation of a reliable alliance. This alliance will prepare and submit a proposal for a network project regarding research on science policy reform and on adequate indicators for reform in CEE. In order to move forward, “barriers” should be broken at the level of funding schemes (disciplines, short terms), evaluation schemes (ranking criteria, publication pressure) and of the system of higher education and science (disciplinary structure), as well as the cooperation with policy and practice.

Status and new trends of science policy in CEE

Jiří Nantl

Science policies of the individual countries of CEE, with the exception of Germany, offer surprising similarities. Science policy is typically controlled by scientists, which results in low political priority and thus low funding. The “great debate” about bottom-up and/or top-down policy is largely absent and EU structural funds have a massive impact on science, since heavy investments are done into the science infrastructure, with often copy-paste smart specialisations, very often in the field of biotechnology or bio-economy throughout all countries. Thus, there are typically no well-defined and/or very generic science policy priorities. Therefore, there is a strong need for well-defined science priorities with an emphasis on the contribution of science to solving global and societal challenges.

How can science support sustainability policy?

Prof Dr Tomasz Żylicz

The definition of strong and of weak sustainability both present conceptual challenges. Both are incompatible with welfare models measured by GDP. Thus, new indicators are needed and some of the most frequently discussed indicator models are “greened” GDP, the Human Development Index (HDI), and the Ecological Footprint (EF). All of them present challenges; obviously HDI and EF do not correlate well, HDI seems arbitrary, EF presents quantification problems. “Greened” GDP in turn requires non-trivial calculations such as proper depreciation and adding non-market benefits, however, relevant studies are well underway. Horizon 2020 covers sustainability in pillar 5, this however only represents 3 out of altogether 80 billion Euro, and presents a limited understanding of sustainability.

Funding programmes and calls for proposals with regard to Central, Eastern and South Eastern Europe (CESEER) – A German perspective

Dr Hans-Peter Niller

Germany attaches high significance towards the completion of the European Research Area (as in the current government coalition agreement) with a strong focus on the CEE region. There are currently several very pertinent funding schemes of the Federal Ministry of Education and Research (BMBF) with currently open calls. In most of these calls sustainability science can be addressed. CESEER is the title of a call for multilateral projects in South East and Central East Europe with the aim of preparing applications for R&D projects in Horizon 2020. The call is open until December 2017. A concrete EU call (esp. Horizon 2020, INTERREG) must be specified, there must be one partner from “CESEER” countries, and at least one additional European country. Duration of projects: up to 2 years; phase 1 for network building, phase 2 for preparation of proposals. Funding from the German side per project is up to 80,000 Euro.

Horizon 2020 in Poland

Dr Andrzej Siemaszko

The Polish “Technology Platform” has set a new strategic direction with a strong focus on bio-economy in light of the Polish smart specialisation strategy. Bio-economy clusters have been established in six regions throughout Poland. There are 60 partners, including academia and private businesses, working towards integrating the strategies of these six regions. In 2016, a national bio-economy platform that brings together partners from all regions is planned. They seek partners and cooperation throughout Europe.

R&D Funding Programmes in International Cooperation

Monika Fechner

The Polish National Centre for Research and Development is the executive agency for the Ministry of Science on science policy issues, incl. research funding and international cooperation. The Centre is partner in over 30 international European and bilateral programmes, funding 359 R&D projects. Bilateral cooperation is fostered through 11 programmes including collaboration with Germany, the Czech Republic, and the International Visegrad Fund. Among others, the second Polish-German Sustainability Research Call (STAIR) focuses on implementing joint sustainability science projects in both countries; it focuses on small and medium-sized enterprises (SMEs) and is open from September to November 2015.

Setting up a transnational, transdisciplinary and transformative research cooperation – but how?

Prof Dr Maik Adomßent

Sustainable development requires interaction at the macro level (politics, society), at meso level (institutions and organisations), and at micro, i.e. personal level. In order to set up transformative and interdisciplinary research projects, suitable topics and relevant actors need to be identified that are able to interconnect the scientific and the political system. “Indicators” are excellent topics in that regard, since they are “boundary objects” between science and politics that can be understood in both spheres – in science in terms of consolidation and aggregation of data, in politics as triggers for decisions. Indicators allow identifying developments over time and in cross-societal comparison, and they form the basis of new models of governance. Indicators need to be suitable for policy reporting, acceptable, available, and feasible and they need to deepen understanding. Previously, Leuphana University had organized a transnational research project on ESD indicators with FU Berlin, University Bern and Forum Umweltbildung Vienna. From that research project, many lessons can be derived about consortium setup, involvement of actors (including non-academics), implementation, and evaluation of the research itself. Within the concept of sustainability science, indicators should not merely focus on scientific objectives but also provide solution-oriented implications for policy.

Country snapshots on the science policy in each country

Nine presentations covered in great detail the main instruments of science policy in each country, the state of discussion on sustainability science and possible ways forward. In several countries, there are right now interesting processes that move towards a more priority-driven science policy. Many countries have identified the need to provide a more robust institutional funding to their research institutes. In other countries, Sustainability Councils have been re-established.

The participants mentioned a number of potential impacts in terms of policy reform. Cooperation on Sustainability Science should contribute to:

- an increased awareness of and increased consensus on the concept of sustainability science;

- the coordination of efforts towards sustainability science at high political level;
- improved university funding tailored to sustainability science (including baseline funding as well as grants);
- a legal reform of qualification schemes for scientists (e.g. PhD programmes for interdisciplinary studies).

Results of the discussions in world café format

Participants discussed in a world cafe format on the content of a concrete network project on STI governance towards sustainability science, i.e. what indicators could be used in order to measure, monitor and evaluate policy reforms throughout CEE.

Guiding framework – what is the research focus? What kind of indicators should be developed?

Different sets of indicators should be developed, e.g. to evaluate the performance within CEE as a whole, and at the same time to evaluate the performance individually at national level. It is important that indicators can be adapted to the national (and later to the institutional) context in order to create ownership for the project. The framework of indicators should involve qualitative as well as quantitative indicators. Quantitative measures could range from ranking systems to the number of scientific projects that include non-scientific actors or the amount of funding for transdisciplinary research. Qualitative indicators could e.g. shed light on how and to what extent science policies foster interdisciplinary research, integrate the SDGs into national policies or to what extent scientific findings are integrated into national and regional policies.

What should be achieved – Which societal impact should the project aspire?

The project should ensure that the indicators proposed can be used in the long term in order to keep the project active and guarantee a lasting effect. Furthermore, the project should have a lasting impact not only on students, but the wider academic community, e.g. by raising awareness, changing the learning environment or flattening of hierarchical structure in university. The project should aspire to involve non academics into research planning and implementation of research, but it could also introduce new methodologies of involving non-academics in peer review processes and evaluation of outcome. It could contribute towards shortening the distance between academia and society and involving non-academics in the setting of science policy agendas. In addition, it should foster open access to scientific findings and research results.

Partners – what partners would be needed?

It was agreed that a thorough stakeholder analysis should be conducted on both EU/CEE level and in the national context, based on agreed criteria for the selection of partners. The partners selected should reflect different fields, e.g. research, policy, quality assurance, etc. Furthermore, important networks should be indentified. They can broaden the scope of the project by providing data and information and by sharing the findings of the project with large numbers of relevant recipients.

Application process – how to proceed

The project consortium will seek to formulate a fist draft project proposal until the end of 2015. This proposal will then be used in order to apply for funds from the BMBF within the call “International Cooperation in Education and Research – The Central, Eastern and South Eastern European Region”. Such a preparatory project of approximately 18 months could serve as a preparation for the application for a larger project funded by the EU, depending on the calls for 2016/17: either a three year Horizon 2020 or INTERREG project.

Based on subsequent discussions, the following Statement of Commitment was formulated and agreed upon by the scientific participants of the workshop.

„Statement of Commitment“

as a result of the workshop in Warsaw on 11/12 September 2015 upon invitation of the Austrian, German and Polish National Commission for UNESCO (follow-up to the 2014 Bratislava workshop)

We, the signatories of this Statement of Commitment, agree to form a research consortium on Sustainability Science in Central and Eastern Europe; we sign this Statement of Commitment in personal capacity and will seek to obtain institutional support of the institutions we represent until the end of November 2015. We commit to jointly formulating a project proposal whose first draft should ideally be finalized by the end of December 2015; if successful, this application should enable us to strengthen our cooperation and to allow us to submit a funding proposal to the European Union as soon as possible.

The research consortium will work on the topic of developing a conceptual framework of indicators for Sustainability Science to be applied to the respective national science systems of participating countries, based on a joint methodology applicable to all CEE countries. Such indicators would be both qualitative and quantitative. The framework needs to be tested and adapted to the national context. The stakeholders need thus to be involved as well. The indicators must be linked to the SDGs and could be integrated with the U-Multirank system. The indicators should be designed in a long-term perspective. They should be used to raise awareness about sustainable development and to establish better contacts with society, to include non-academics into academic research, into peer-review processes and into funding decisions.

The potential partners in the project should be identified based on a structural stakeholder analysis with clear criteria, in the national as well as in the wider EU context, differentiating sectors, networks and strategic partners; the first draft list should be finalized ideally by the end of 2015. Partners need to be differentiated according to level of involvement (core partners, secondary partners including test partners, as well as others that would only be informed). Modes of communication will be defined as appropriate.

The research consortium plans to submit a preparatory project proposal to the BMBF programme "International Cooperation in Education and Research – The Central, Eastern and South Eastern European Region" (call of 3 November 2014), with additional contributions from other CEE countries to be sought. Such a preparatory project of some 18 months should prepare a 3-year Horizon 2020 project (given that there are adequate calls in the 2016/2017 period), otherwise an INTERREG project will be considered. The preparatory project will be governed by a Steering Committee of scientists (1 focal point per country), that will be in charge of liaising with scientific and other partners in the country. The governance of the actual Horizon 2020 project might need to involve these partners more directly. The preparatory project will seek to preliminarily map partners and their interests and to involve them in a preliminary manner. The conceptual clarification of Sustainability Science will be among the work packages. The involvement of other EU member states and UNESCO into the Horizon 2020 project will be sought as appropriate.